

SHIFTING PERCEPTIONS OF SACRED SPACES:
CEREMONIAL REUSE OF MAYA ARCHITECTURE AND MONUMENTS
AT SAN BARTOLO, GUATEMALA

BY

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Abstract

The ancient Maya site of San Bartolo experienced a decidedly turbulent history that is characterized by several phases of occupation and abandonment. This research illustrates how the San Bartolo community reacted, responded, and adapted to these periods of volatility by ritualizing pyramids, palaces, monuments, and other public spaces. Specific ceremonial rites effectively utilized the past as an anchor for the present, while others marked the final exodus from the site some time shortly after A.D. 800. This work draws from archaeological excavations, paleoethnobotanical finds, ceramic analysis, and ethnographic accounts to flesh out both the continuities and disjunctions among a number of religious rites that were performed across the site. Broad issues of social memory, agency, and place emerge at the intersections of these data sets. Ultimately, these investigations demonstrate how the cultural landscape of ancient Maya cities was something constructed, maintained, and reconstructed over time. Finally, the paleoethnobotanical finds indicate that the ancient Maya of Late Classic San Bartolo employed a kind of “floral tool kit” that was utilized in otherwise distinct ceremonies across the site.

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Chapter I

Introduction

Archaeological investigations at the site of San Bartolo, Guatemala, show how the site's inhabitants modified important buildings, monuments, and public spaces over the course of the site's decidedly turbulent occupational history. This modification entailed not only the physical altering of architecture, but also changes in the way structures were conceptualized by the residents of the site, notions that were clearly not mutually exclusive. Using a multidisciplinary data set compiled from archaeological excavations, paleoethnobotanical finds, ceramic analysis, and ethnographic accounts, I have been able to determine that the ancient Maya of San Bartolo were performing rites of veneration and termination at distinct locales across the site in the era just before the Classic Maya "collapse." This research illuminates how the community-held perception of important public architectural features underwent radical shifts over time and, perhaps most significantly, how archaeologists can strive to address non-material issues like intentionality in the context of ancient ritual practices.

San Bartolo, a medium sized site located in the northeastern corner of Guatemala, is perhaps best known for its spectacular murals, which were discovered by William Saturno in 2001 (Saturno 2001; Saturno *et al.* 2005). The murals, which at one point encircled a 9 x 5 meter room in the pyramid Las Pinturas, provide a vivid narrative of the ancient Maya story of creation. In so doing, the renderings portray some prominent aspects of ancient Maya ideology and religion, including the

interrelated concepts of birth and rebirth, the importance of sacrificial practices in ceremonial rites, and notions about ancestral and celestial realms beyond that of living humans (Saturno *et al.* 2005). The San Bartolo murals were created during the Late Preclassic period (400 B.C. – A.D. 200), which was the time when the site was clearly in its heyday. All of the monumental architecture at San Bartolo, including the two main pyramids, a large plaza, a ballcourt, and a royal palace, were initially constructed at this time. Some time shortly after A.D. 200, the site was largely abandoned and remained vacant until about A.D. 600. The focus of this work is this final phase of occupation, when the site was refurbished, revitalized, and ultimately abandoned once again.

The nature of Late Classic period (A.D. 600-800) religious practices at San Bartolo is clearly shaped by the movement of groups in and out of the site over time. Certain ceremonial rites effectively utilized the past as an anchor for the present, while others marked the exodus from the site some time shortly after A.D. 800. By employing multiple lines of evidence, I will address issues of continuity and disjunction in the ceremonial practices of the Late Classic Maya of San Bartolo. More specifically, I will explore how the treatment of specific buildings and monuments can help us to interpret ancient notions about the past, the present, and the future. It is clear from archaeological excavations at the site and investigations across the central lowlands in general that the Late Classic Maya of San Bartolo underwent several phases of major transition during this time period. They responded to these changes by modifying and ritualizing important features in their built landscape.

However, despite the fact that the intentions of these ceremonies varied quite considerably, paleoethnobotanical evidence from excavations across San Bartolo indicates that the ancient Maya employed a rather standardized kind of “ritual tool kit” in the execution of these rites. This “kit” included the use of local tree leaves and specific cultigens, including guava fruit and the tuber of the *Calathea* plant. The botanical finds are significant because they illustrate how even the most “mundane” class of material residue, like tree leaves, can provide insight into religious practice. As such, this work is helping to pioneer a new application of paleoethnobotanical data to archaeological studies, more explicitly, to the reconstruction of ceremonial practices.

Theoretical Underpinnings: Meaning, Agency, and Mental Maps

The interpretation of offerings as such, something that is critical to these investigations, hinges on the assumption that archaeologists can access the culturally-held meaning of objects to some degree. By meaning, I refer to notions that are embodied within the artifact itself and are not necessarily related to the object’s intended function. For example, it can be stated that most pot sherds represent a vessel that was manufactured to perform a particular task. By looking at attributes like vessel form, decoration, and usewear, analysts can make assertions about the nature of a pot’s original function. As such, we have developed broad categories in ceramic analysis like “serving,” and “utilitarian,” wares. The implication is that some pots were used for cooking and storage, and the rest were used for variety of special

occasions. However, these vague descriptions address only a fraction of the vessel's actual period of use. William Walker (1999, 2002) recommends considering artifacts as complex objects, each with its own "life history." He applies this approach not just in a utilitarian framework, as Binford (1987) suggests, but he uses it to address all the roles the artifact played during its lifetime, utilitarian and ritual alike. For example, a water jar might later be sacrificed as part of a series of sacred gestures that were intended to pay homage to some ancestral feature. Looking at vessel form and surface decoration would not provide any clues about this final act. By acknowledging that objects are in fact layered with meaning that changes over time, we can move beyond looking at a pot's function to what the object may have meant in the past.

Debates over the issue of meaning and our ability to access it as archaeologists emerged early in Americanist archaeology in the writings of Griffin (1943) and Taylor (1948). While Griffin (1943: 340) asserted that, "...the real significance of any object in an ethnological sense has disappeared by the time it becomes a part of an archaeologist's catalogue of finds," Taylor proposed that, as archaeologists, we are first and foremost anthropologists and are therefore obligated to approach all aspects of culture. Watson (1995: 685) provides a concise summary

of Taylor's position in the following excerpt:

The archaeological record can reveal ancient culture – the mental activities of long-dead people – if skillfully interrogated. The archaeologist as archaeologist is merely a technician digging up physical material and their associations, in space and time, but the archaeologist as anthropologist is uniquely qualified to produce truly cultural information about ancient people and extinct societies throughout time and space.

A decade later, Philip Phillips and Gordon Willey made the famous declaration: “American archaeology is anthropology or it is nothing” (Phillips 1955; Willey and Phillips 1958). Lewis Binford (1962) later took up the cause in his seminal article, “Archaeology as Anthropology.” However, Binford was ultimately not concerned with ideology and meaning. He considered them to be “epiphenomena,” or, quite literally, something secondary to issues of economy and technology (Watson 1995). His justification for this was that while ideological concepts were important in the past, archaeologists lacked the methodological tools in the present to truly understand them (Binford and Binford 1968). The work presented here thus provides a decided critique of this position. It asserts that we *do* have the tools to understand religious activity in the past. After all, if we do not attempt to differentiate between religious and domestic contexts, then how do we interpret either one? For example, by applying a purely functional model, every deposit of ancient Maya ceramics and ash would be an indicator of cooking refuse. Given the broad range of activities that result in this kind of feature, including feasting events, termination rituals, and, indeed, kitchen-related activities, a purely functional approach would result in a gross oversimplification of the data. We must consider a

wide range of behaviors in the interpretation of archaeological finds lest we ignore significant models and explanations.

Some of the principles applied in the interpretation of this work are drawn from post-processual, or interpretive archaeology (Hodder 1991). Clearly investigations of ritual behavior tend to rely on the notion that objects are imbued with meaning. This concept, which Hodder and Huston (2003: 26) refer to as the “ideational realm” is one that processualists like Binford certainly acknowledge exists, but propose is unattainable via the scientific method. In fact, in regards to accessing meaning from the archaeological record, Binford (1987: 397) has stated that Walter Taylor and others (including, we can presume, the post-processualists of the modern era), “...continued to delude themselves into believing they could achieve the improbable.” However, despite resistance, post-processual scholars continue to assert that meaning is attainable. Post-processual notions about meaning suggest that objects served also as symbols of something beyond that which may be suggested by their overt attributes and, most importantly, that underlying notions embedded within the objects can be acquired through archaeological investigation. In other words, a jar may have been manufactured to hold water, but at the time it became an offering it had changed at the functional level to become a ritual object as well. Furthermore, over time the nature of said jar could again transform to become representative of the individuals, or more specifically, the ancestors, that had contact with the object. As such, we should not expect that specific classes of objects can necessarily serve as indicators of ritual or domestic activities.

Another important post-processual concept that emerges from this discussion is that objects are not static, but are in fact complex “texts” waiting to be read (Gamble 2001: 103). This stems from notions about culture as something shifting, dynamic and potentially reflexive (Hodder 1999). Artifacts and features, as material culture, become layered with symbolic meaning over time, for example, from water jar to ritual offering to ancestral object. The meaning that objects held in the past continually changed according to how, when, and by whom they were being used. Returning briefly to Walker’s concept of “life histories,” the condition of artifacts is an essential component to interpreting them as ritual in nature. Walker (1998) aptly asserts that understanding how objects and people “interact” and, of course, the material residue that this interaction leaves behind, is absolutely critical to recognizing ceremonially interred items. He and others (Brown 2004) suggest that rather than focusing on artifact types or classes (e.g. – “elite” vs. “non-elite”), we should also look at the treatment of the objects. Smashing, breaking, and burning are all specific behaviors that are linked to ceremonial deposits in the Maya area and are abundantly evident in ritual deposits at San Bartolo. However, as I shall illustrate throughout this work, the archaeological context in which an artifact is found is also absolutely essential to interpreting its function, at the very least, at the time when it was interred. This notion is evident the ritual behavior associated with important structures across Late Classic San Bartolo. Objects that were likely created for “mundane” purposes like carrying water, were smashed by the Maya and placed in

specific ceremonial locales across the site, indicating that they had complex and dynamic “life histories.”

Issues of agency, or intentionality (Hodder and Hutson 2003), are also central to some discussions in this work. Agency theory suggests that when individuals in the past had the ability and desire to act, they engaged in actions that we can reconstruct in the present. This concept contrasts somewhat with earlier structuralist-held notions (e.g. – Lévi-Strauss 1963) that human action is a product of their perception of an underlying mental and social structure. While post-structuralist notions of agency vary (see Hodder and Hutson 2003: 99-105), the middle ground is characterized by the concept of “structured agency” (Joyce and Lopiparo 2005). This position essentially asserts that individual actors will not act as radical and free-wheeling vehicles of change, but enjoy a certain degree of “wiggle room” within the social structure. However, as Joyce and Lopiparo (2005) suggest, all actions are prefaced by some set of similar events. In the discussion that follows, agency is useful not so much for looking at issues of conformity and non-conformity, but to enrich notions about the intentions behind specific acts of ritual performance at San Bartolo. Intentionality is approached by contrasting the material record, the archaeological contexts, and the historical implications of each of the archaeological deposits that are examined in this study. When a larger body of data on ritual and other kinds of behavior at San Bartolo is available, perhaps it will be possible to orient these acts within the overall religious structure of the community.

Issues of meaning and intentionality weigh heavily in the discussions of archaeological finds at San Bartolo. However, while interpretive archaeology has influenced some of the interpretations presented here, key tenets of post-processual thought, like issues of gender, class, and power, are not addressed in this body of work. Furthermore, I would assert that some degree of objectivity in archaeological interpretation is possible and attainable, a notion with which Hodder and others would decidedly disagree (e.g. – Hodder 1991; Hodder and Hutson 2003; Shanks and Tilley 1988). Consequently, in my work I have strived to draw from both processual and post-processual notions about our ability to interpret the past in the present. While the exploration of ritual behavior would be a terribly dry affair were we not to address the idea that objects and events are layered with meaning, it is my assertion that these concepts can be explored empirically and explained objectively.

This position is captured by the discourse on “cognitive archaeology,” or the study of mental processes in the past. In his definition of cognitive archaeology, Renfrew (1994a) attempts to situate it between the processual and post-processual schools, although he is far more critical of the latter than the former. For example, while he critiques Binford (1987) for suggesting that attempts to get at human thought are nothing more than “paleopsychology,” he is clearly more disturbed by the post-processualist belief that one can “enter the mind” of ancient people in an empathetic manner. According to Renfrew (1994a: 5), the goal of cognitive archaeology is, “to seek to study the way in which cognitive processes operated in specific contexts, and to investigate the interrelationship between those processes and the social context

which harbored and promoted them.” In other words, Renfrew is asserting that archaeologists can apply scientific methods to look for patterns in the record that illustrate not *what* ancient people were thinking, but *how* they were thinking it and the manner in which this thought shaped behavior in the past. One classic example of the application of this approach involves the Acheulean handaxe. Via experimental archaeology, scholars have been able to reconstruct how these tools were made and we can now assert that the process of making them involved practice and skill, but also planning. As such, material culture provides evidence that *Homo erectus* had the mental ability to plan.

Renfrew (1994a, 1994b) has suggested that the cognitive archaeological approach is an excellent way to address ideology in the past. It is the embracing of this concept that separates cognitive from the traditional processual approaches. Ironically, however, Renfrew is very explicit in rejecting the whole notion of accessing meaning in the past, most likely because he feels the concept has been abused by the post-processualists, or as he has dubbed them, “anti-processualists.” He prefers to look at what an object, structure, or piece of art “symbolizes” rather than what it “means.” I question Renfrew’s hang-up with the term “meaning” and suggest that we should strive to acquire this level of interpretation when the data allow it.

What Renfrew suggests is that only through the patterned use of symbols can we get at ancient mental processes. Indeed, ritual behavior, by definition, was and continues to be laden with symbolic behavior. Regarding the reconstruction of

religious practice, then, the cognitive approach dictates that while we cannot get at what the participants were thinking, we can assert that they thought of actions or objects as something broadly “supernatural,” “sacred,” or “holy.” Renfrew cites as an example of the repetitive use of red ochre in Upper Paleolithic burial practices. While we cannot get at the meaning of the ochre, per se, it is evident that, “...the living contemporaries of the deceased were acting in a manner consistent with a belief in an after-life for him or her” (Renfrew 1994a: 8).

In general terms, Renfrew proposes that the way every individual, himself included, engages with the world around them is shaped by their own unique mental maps, or *mappa*. The concept of *mappa* is that we, as humans, take in the external world via our own personal experiences. Thus, our notions about the world and the material culture that we produce will be a manifestation of this. He suggests that, “once one has accepted this notion as a reasonable one, the systematic consideration of the cognitive map or *mappa* is no longer dismissed as a ‘palaeopsychology’” (Renfrew 1994a: 11). Essentially this concept is very similar to that of “structured agency,” although the critical difference is Renfrew’s emphatic assertion that systematic scientific methods be employed. In other words, the cognitive maps of past individuals or groups must be constructed from the data that still exist in the present.

Despite Renfrew’s cautionary remarks, the notion of *mappa* provides an avenue for approaching issues of meaning and intentionality, particularly in regards to

the ancient Maya. Renfrew (1994a: 11) addresses this possibility in the following:

“But we have other evidence for the nature of that *mappa*, for instance in the form of depictions of aspects of the world...From this viewpoint, the project of undertaking cognitive archaeology is equivalent to the study of those preserved aspects of past material culture and of such of the activities of early societies as may allow us to make valid inferences about the cognitive maps of their inhabitants.

Here Renfrew acknowledges that archaeologists are working with very different data sets, and he provides a path by which one can take interpretations a bit farther than evidence from the Paleolithic, for example, may allow. He indicates that there is a strong correlation between the nature of the archaeological evidence and the level of detail that will feed into our notions of ancient cognitive maps. Returning to the Maya, we generally have very rich data that includes artwork, epigraphy, iconography, and ethnography, from which the *mappa* of past individuals can be reconstructed in the present.

Investigations by Marcus and Flannery (2000) on Zapotec ritual behavior provide an excellent example of how Renfrew’s approach to cognitive archaeology can be applied to complex data sets. In this work, they use three main lines of evidence to understand the changing nature of Zapotec ceremonial rites and religion over time. They employ the Direct Historical Approach (using data from Spanish ethnohistoric sources), the use of public areas and ritual structures, and the presence of “religious paraphernalia” to outline a model for identifying ritual practices at the sites like San José Mogote and Monte Alban. For example, Marcus and Flannery (2000: 214) predict that quail remains could be an indicator of ceremonial behavior at these sites. This assertion is based on ethnohistoric accounts that report how the

Zapotec considered quail “appropriate” for sacrifice because they were seen as “clean” or “pure.” In this way, quail bones become part of a ritual “package” that can be sought out in the archaeological record (Marcus and Flannery 2000: 229). However, at no point do the authors suggest that the Zapotec who lived in Monte Alban at 200 B.C. sacrificed quails for their purity. Rather, given the tenacity of notions about what is “ritual” or “sacred,” they use this class of religious paraphernalia to illustrate some degree of continuity in the mental maps that govern the execution of Zapotecs rites over time. This approach to cognitive archaeology, that which draws upon multiple lines of evidence and seeks to understand the layered meaning of objects and gestures, strongly parallels the manner in which I address ritual behavior at San Bartolo.

Studying Ritual Behavior at San Bartolo

I came to investigate ancient Maya religious practice in 2002, during the first field season at San Bartolo, after I conducted excavations at a feature we then called “Mound 52.” The mound had one looter’s tunnel that had been carved from its southwest edge into its center. From this tunnel, all that could be seen was a dense concentration of ceramics and ash. My interpretation was that Mound 52 contained a large midden deposit, perhaps representing refuse disposal from the nearby palace structure. Since a major goal of the project’s research design was to establish the site’s ceramic chronology, the excavation of this deposit seemed an ideal way to wrap up the season. I put one 2 x 2 meter unit at the summit and quickly encountered what

turned out to be a very thick layer comprised entirely of broken Late Classic pottery in an ashy matrix. During the final days of excavations, as always seems to be the case, I encountered human remains. Just below the remains, I uncovered a well-preserved plaster floor. At this point, the deposit clearly did not represent a typical midden deposit, but did not appear to be overtly ritual in nature either. It was evident that Mound 52 warranted more than one season of work. The following year, in 2003, excavations quickly revealed the walls of a T-shaped building (Structure 63) surrounding a Preclassic potbellied monument that had been set into the floor. The ceramics and ash fanned out along the front of the potbelly. So what had initially appeared to be a refuse deposit ended up being a massive ritual offering. I had read about such enigmatic deposits in the literature (e.g. - Garber 1986; Kunen *et al.* 2002; Walker 1995). Nevertheless, there was a transition during which I made the shift from thinking of those sherds as trash to recognizing them as offerings. In fact, it took the entire 2003 season and some persistence on my part to get some others working at the site to stop calling Structure 63 a “basurero.” From this point on, my interest in ancient Maya ritual behavior was irrevocably piqued.

During 2004, it was my great fortune to work with William Saturno exposing the West Wall of the mural room in the pyramid Las Pinturas. Among other finds, including the murals themselves, these excavations provided abundant evidence that the Late Preclassic (400 B.C. – A.D. 200) Maya had performed an elaborate series of actions geared at closing and terminating the space (see Craig 2004a). As we tunneled up to and along the wall itself, we encountered clear evidence that portions

of the room had been intentionally destroyed and that pieces of the two fallen murals (the East and South Walls) had been mixed into the room fill. Once the West Wall was exposed, it was clear that certain areas of it had been hacked off. The cut marks were visible in the stucco and the tools themselves had evidently been tossed into the rubble being used to fill the room. Cut marks also surrounded a panel of text on the West Wall, but for some reason whoever intended to remove them changed his or her mind. Peppering the floor along the front of the wall were several large burn marks. In some areas the floor was completely blackened and had apparently cracked from the heat. I have to admit that I found the evidence for this highly ritualized process of destruction just as intriguing as the elaborate scenes of creation that we were exposing above.

In the final few weeks of 2004, I conducted a series of excavations across the site looking for dedicatory caches, which are interments of ritual items that were often placed under the floors or within the corners of buildings. I was particularly interested in trying to find Late Preclassic caches in an effort to broaden notions about the kinds of practices that were evidenced by the mural room excavations. I investigated under the center line of the mural room at Las Pinturas, at the façade corners of the Palace Tigrillo, and in front of several stelae in the site's main plaza. Much to my surprise, I didn't find any evidence for ritual behavior, let alone dedicatory caches, at any of these locales. This was a disappointment, but helped me to sharpen my models and consider new strategies.

My encounters with evidence for ceremonial practice between 2002 - 2004 was absolutely central to subsequent work that I conducted at the site because these experiences vastly broadened my perception of how Maya religion is manifest in the material realm. I also learned that Maya ritual practice could be unexpected, unpredictable and, rather maddeningly, it sometimes seemed to follow no pattern at all. Furthermore, I came to understand better than ever before how essential context is in the interpretation of archaeological finds. This knowledge was critical in recognizing and understanding a number of ash deposits that I uncovered on the collapsed façade of the pyramid Las Pinturas in 2005.

In 2005, picking up where I had left off the year before and this time with funding from a Fulbright grant and a larger team of excavators, I set out to look for dedicatory caches on the front corners and along the center line of the final phase of Las Pinturas. It was during these investigations that I exposed a thick layer of ash and ceramics on top of the architecture in clear association with the building corners. I had expected to find only building collapse from above on top of the structure and the ash layer came as somewhat of a surprise. In retrospect, had I not found it on the corners (the very context in which I had predicted I might find caches beneath the architecture), while I would have documented the ash, I might not have collected samples of it for paleoethnobotanical analysis. In the end, the analysis of this ash provided a data set that was absolutely pivotal to the interpretation of the deposit as a whole and ultimately to the nature of religious practice at San Bartolo.

Context, Contents, and Definitions

As this discussion above has illustrated, the consideration of archaeological context was integral to recognizing, excavating, and interpreting the data on which this work is based. In architectural investigations that begin from the exterior of the building at ancient Maya sites, definitions of “context” are often fairly straightforward. There are generally two levels until the building is reached: *humus* encompasses the area from the surface to the base of the organic overburden; and *collapse* comprises everything from the base of the humus layer to the intact structure. Any finds that are above the intact architecture have traditionally been interpreted as part of the process of collapse or as having “poor context.” Indeed, William Coe, in his work at Tikal (1965) and Piedras Negras (1959) referred to finds like these as “exposed offerings” or “problematic deposits.” Deposits found on top of architecture were not given much attention until the work of David Freidel and James Garber at Cerros, where “termination deposits” (see discussion below) were discovered in abundance and interpreted as such (e.g. – Garber 1981, 1983). Perhaps these kinds of features were encountered with frequency in Maya archaeology before the 1980’s, but were disregarded or misinterpreted. In regards to termination, Freidel *et al.* (1998:142) make the following cautionary remark:

(Termination deposits can be)...especially vulnerable. Many termination deposits occur outside the final preserved architectural contexts, walls, and floors. Traditionally, Maya archaeologists have searched for “sealed deposits” of artifacts inside such preserved buildings, to the detriment of their observations of “out of context” dirt and marl matrix blanketing the buildings. With care and caution, however, we may begin to find that the “out of context” overburden contains some of our most useful evidence of intentional behavior.

Freidel raises a very important point here. That is, archaeological interpretations, however well-founded and scientifically formed, are ultimately the products of methodology and perspective. The collection of data is based on the expectations of what might be found, and even the most meticulous of excavators, when encountering material that is “trash” or “refuse,” according to his/her own experience and the work of previous scholars, will interpret the deposit as such. Conversely, if the expectation is to find evidence of ritual behavior, what appears to be “trash” can take on myriad meanings far more profound than simple disposal. As such, the careful consideration of both the archaeological context and the condition of the objects themselves should be used in tandem when trying to ascertain the meaning, intention, or significance of a given deposit.

However, this work cautions against using information about context and contents to derive concrete definitions for ritual behavior deposits. These typological distinctions, while useful in some regards, can detract from the variability that may have characterized actual ceremonial practice in the past. For example, this problem emerges in the rigid distinctions that have been created between ancient Maya dedication and termination rituals. Whereas dedication deposits are thought to have “ensouled” an object or building, termination rituals represent an act of closure, or “death” (Freidel 1998). In the material sense, dedicatory items are expected to be whole and somewhat protected, whereas terminated features are defined as a composition of broken or burned objects left on the surface. Mills and Walker (2008) have rejected the dichotomy between “structured deposits,” or those that appear

intentional, and “unstructured deposits,” or those that seem accidental, mundane, and lacking in larger meaning. They suggest that what we find in the archaeological record represents a kind of continuum of ceremonial practice, a notion that has been suggested by others (e.g. – Kunen *et al.* 2002). This is a much more useful model for defining and interpreting ritual behavior among the Late Classic Maya of San Bartolo. While the categories applied by other scholars have been useful in defining some patterns of ceremonial practice at San Bartolo, as I will assert throughout this work, the evidence for religious rites at the site exhibit both continuity and disjunction. It is from the interplay of these seemingly contradictory notions that some of the most compelling interpretations about Maya religious practice at San Bartolo emerge.

Summary of Chapters

Chapter II is intended to set the scene for the rest of this work. The chapter first addresses the geography, climate, flora, and fauna of the central lowlands. The next section of this chapter recounts a cultural history of the region from the Middle Preclassic to the Terminal Classic periods. For each time period, the evidence from San Bartolo is first summarized and then the discussion broadens to the historical events that occurred during this time at surrounding sites. The final portion of Chapter II addresses some important theoretical issues that are pertinent for framing the interpretations that follow. First, I discuss how ritual behavior is defined and identified in the archaeological record. Here I explore what it is that religious rites *do*

in a social sense. I also address how it is that archaeologists actually identify ceremonial behavior in the record. The second part of this theoretical overview addresses ethnographic analogy. In some of the chapters that follow, particularly Chapter VI, ethnographic accounts greatly enrich the data set. This section both defends the use of ethnographic analogy in general, and defines how it will be applied in the discussions that follow.

Chapter III is a description of the archaeological excavations that are relevant to this work. As this chapter illustrates, I conducted a broad suite of excavations geared at understanding ritual behavior both in San Bartolo's Preclassic and Classic past. Many excavations provided an abundance of information on ceremonial practices, but some were less lucrative in this regard. All of the excavations I conducted between 2002 and 2005, not just those that yielded evidence of ritual, are described in varying levels of detail in this chapter. As I illustrate in this chapter, the absence of data is some times just as important as their presence in establishing patterns of ceremonial practice. The investigations described in this chapter are as follows: Structure 63, the Las Pinturas façade, the Las Pinturas reservoir, Structure 4, the Las Ventanas façade, Las Ventanas Room 1, Structure 157A, and small excavations at the Palace Tigrillo.

Chapter IV discusses the ceramics that were recovered from the major excavations discussed in the preceding chapter. It summarizes the results of primary analysis conducted on sherds from Structure 63, Las Pinturas, Las Ventanas, Structure 157A, and Structure 4. I provide comparative tables to illustrate the

distribution of certain types across the site as well as a discussion of the implications of the discontinuities among the assemblages. I describe refitting experiments that were conducted on the Structure 63 and Las Pinturas assemblages. I also explore specific behaviors that are implied by the state of some of the sherds.

Chapter V provides a description of the paleoethnobotanical finds from excavations across the site. Both phytolith and pollen analysis were conducted in this investigation. This chapter provides a short history of each technique and reports the finds from each context. It should be noted that this research relies far more heavily on phytolith than pollen data, which is reflected in the discussions dedicated to each in this chapter. The final portion of the chapter provides a lengthy discussion of the implications of the presence or absence of certain plants in the different archaeological contexts.

Chapter VI acts to weave the three previous data chapters together by addressing patterns in the data set as a whole. The discussion focuses heavily on Las Pinturas, as the largest body of data comes from this context. This chapter incorporates archaeological, iconographic, epigraphic, and ethnographic data sets from across the Maya area to reach a number of final interpretations about the ritual deposits found at San Bartolo. This chapter ultimately sorts out why some lines of evidence in this work show continuity while others are quite distinct from one another. Ultimately, this chapter proposes that both termination and veneration rites are represented by the deposits of ash and ceramics found on buildings across the site.

Chapter VII concludes the dissertation. This chapter looks at the continuities and disjunctions to approach the larger implications for Late Classic San Bartolo. In this chapter, I draw on notions of abandonment and social memory to create distinction between specific religious rites that were performed at San Bartolo, but I also examine notions of landscape and ritual symbolism as a way to structure ceremonial practices in general at the site. I conclude by discussing the larger contributions of this work and the future directions it could take.

Chapter II

Setting the Geographical, Historical and Theoretical Scene

The Physical Setting

Climate and Environment

A.V. Kidder wrote, “I learned what grim country the Petén is on my first trip to Uaxactun” (Smith 1950: 3). In 1928, he trekked to the site with the Sylvanus Morley and George Vaillant and later recounted their journey:

Hour after hour in single file on a the narrow, twisting trail, the dense forest pushing in on either side with an almost physical pressure, the healthy sunlight never reaching the ground save where the fall of some great tree had brought down others with it...Hour after hour of moist, green gloom. Then we would break out into a *bajo*, a low area, in the rainy season a bottomless swamp, the trail now parched and cracked. The sour soil of these always dreaded stretches supports only a tangled, scrubby bush...the sun beats relentlessly down, clouds of stinging flies envelope everyone. Across, it was good to be again in the cool, quiet forest.

Kidder’s description captures the stark contrast between the two major microenvironments of the Petén: upland deciduous forest and lowland *bajo*, or seasonal wetland. Indeed, traveling from Uaxactun to San Bartolo on the back of a pickup, about a 40 km journey, I was repeatedly struck by how often the foliage, the wildlife, the light, and the air would radically change as we bounced along dusty roads and root-laden logging trails.

The Maya area is divided into three main regions: the Pacific coastal plain, the highlands and the lowlands. Elevation, annual rainfall, and climate are the major inter-related factors that distinguish these three areas from one another (**Fig. 2.1**).

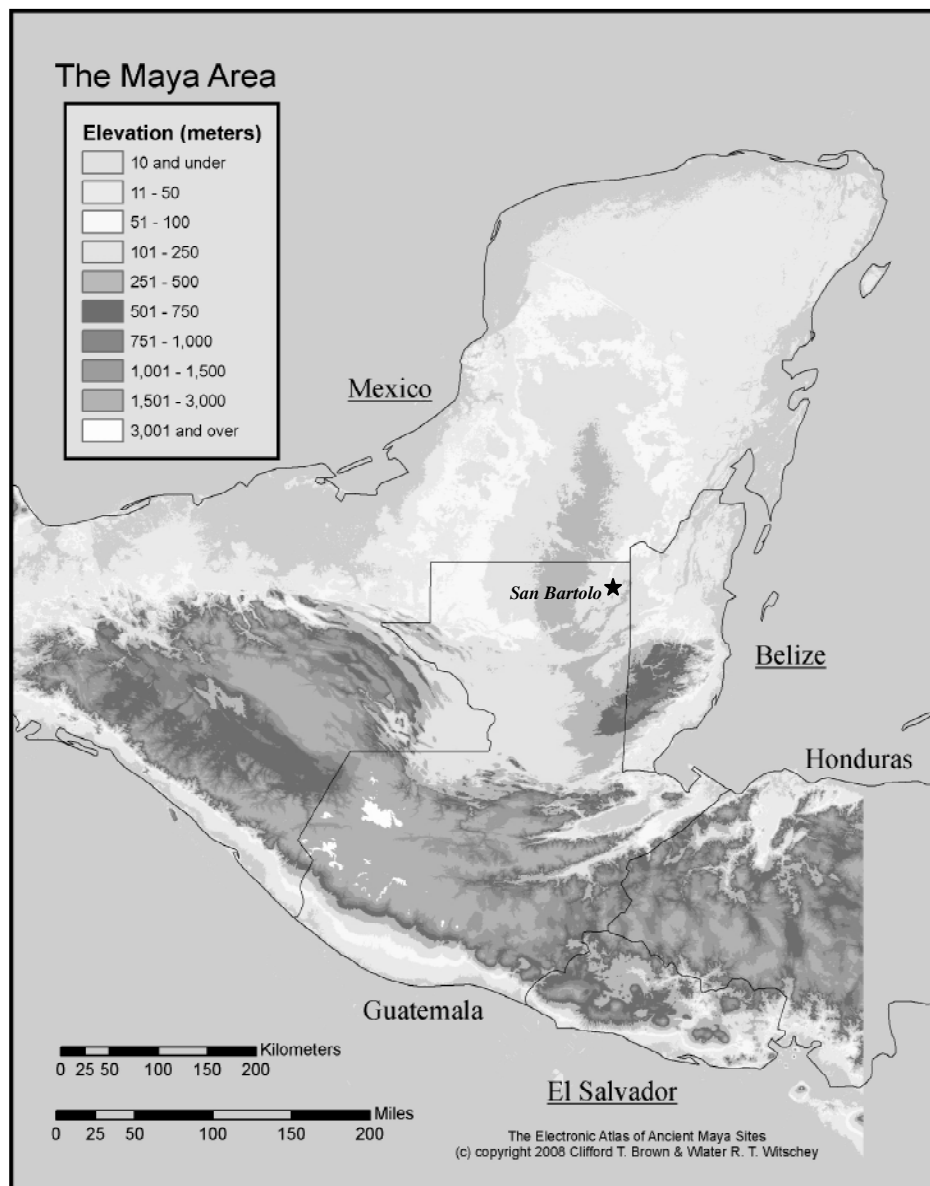


Fig. 2.1: Elevation Map of the Maya Area.
Retrieved From: <http://mayagis.smv.org> on 08/20/09

Some scholars continue to separate the lowlands only into southern and northern areas by using the transition from deciduous forest to dry savannah that occurs north of the border with Mexico as a dividing line. However, I follow Sharer (2006) and

others by separating out the central lowlands, an area that encompasses the region from north of the Usumacinta River to about 100 km beyond the border of Yucatan from the southern lowlands, which includes the region north of the highlands to the Usumacinta (**Fig. 2.2**)

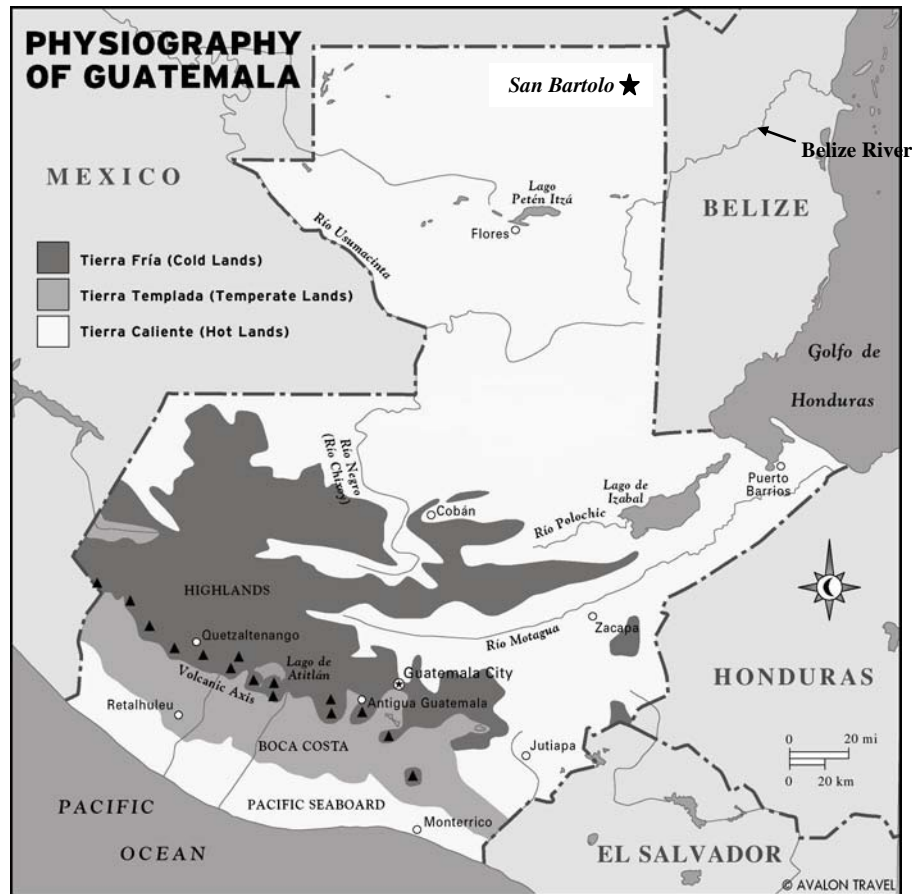


Fig. 2.2: Physical Geography of Guatemala
(Retrieved from: <http://www.moon.com/files/map-images/>. Adapted by author.)

Generally-speaking, the southern and central lowlands are characterized by tropical forest. However, the availability of freshwater is a major defining factor between these two regions. The southern lowlands generally receive 2000-3000 mm of rainfall per year while the average in the central lowlands is less than 2000 mm per year. Furthermore, the southern lowlands also have a greater number of year-round

water sources than the central lowlands, including the Usumacinta and its many tributaries, as well as the Sarstoon River, the Río Dulce, and Lake Izabal. As one continues to move north into the northern lowlands, the aridity increases and water become even more scarce. In this region, which encompasses the Yucatan Peninsula, the annual rainfall average can be as low as 500 mm (Sharer 2006). The area generally becomes increasingly flat and the soils thin as sea level is approached. There are few major sources of freshwater in the northern lowlands, particularly inland. The ancient Maya of the northern lowlands relied on *cenotes*, or natural wells formed in the limestone, that pepper the region.

San Bartolo is situated within the central lowlands in the northeastern corner of the Department of the Petén. In the central lowlands, approximately 90% of the rainfall for the year occurs during the rainy season, between the months of May and December. However, as Dunning and Beach (2000), have shown, this can vary dramatically from year to year. The karstic landscape of the northeast Petén can exacerbate the harshness of the dry season, as uncaught rainwater will escape beneath the limestone and become inaccessible (Dunning *et al.* n.d).

The central lowlands contain a few major rivers, a series of lakes around the modern town of Flores, and many *bajos*, or low-lying areas that become swamps or perhaps shallow lakes during the rainy season. The region's major lakes, the largest being Lake Petén Itza, and rivers, including the New, Belize, and Hondo Rivers, make up the system that drains water across the Central Lowlands and ultimately to the Caribbean Sea. In the northeast corner of the Petén, where San Bartolo is

situated, there is a general paucity of large lakes and rivers that could have been used by the community as their main source of water. The two closest rivers to San Bartolo, the Ixcan and Tikal, flow seasonally northeast to join larger Blue River, but are located about five and nine km away, respectively (Garrison 2007: Fig. 2.3). We can therefore assume that the most likely reliable source of water for the residents of San Bartolo would have been a series of *bajos* that surrounded the site, the largest of which were Bajo de Azucar and Bajo Itz'ul (Dunning *et al.* n.d.). Dunning *et al.* (n.d.) has estimated that 40% of the area in a 5 km radius around San Bartolo is made up of *bajos*. Extending this to a 10 km radius around the site, 70% of the land is made up of *bajos*. The area in and around San Bartolo is also peppered with *aguadas*, or ponds. Dunning *et al.* (n.d.) has found evidence that many of these *aguadas* were modified so that they could better collect and hold water.

Flora

There are two major environments that should be discussed in regards to San Bartolo: 1. the upland forest where the site core is located; and 2. the surrounding *bajos* around which much of the site's supporting agricultural community would have lived.

The forests of the northeast Petén have a double canopy, although one that is not nearly as extreme as those found in Amazonia. The uppermost canopy, which is above 40m (Schlesinger 2001; Sharer 2006) is dominated by several tall species, including mahogany (*Swietenia macrophylla*), chico zapote (*Manikara archras*), and

cedar (*Cedrela odorata*). Below this is a lower story of trees that include ramón, or breadnut (*Brosimum alicastrum*), allspice (*Pimenta dioica*), chechem (*Metopium brownei*), and a variety of palms. Smaller palms, shrubs, and various forms of groundcover vegetation occupy the area below the lower canopy to the forest floor. Lianas, or woody vines, start on ground weave their way up through the trees creating chaotic webs in the foliage.

Bajos are generally low woodland areas that have very acidic clay-laden soil (Schlesinger 2001). The nature of the soil enables water catchment, and during the rainy season they will fill up and hold water, transforming an otherwise hot barren landscape into a swamp. However, *bajos* exhibit considerable variation across space, even in the area right around San Bartolo. *Bajos* can be characterized by a number of discrete microenvironments that are distinguished based on the predominance of certain vegetation types or individual taxa (Kunen *et al.* 2000). Scrub bajos tend to be dominated by low-lying plants, provide little cover, and are very difficult to navigate. Palm bajos contain a much higher number of palm species that provide a kind of canopy. There are also transitional zones in which a roughly equal density of palm and scrub taxa will grow. The area around San Bartolo exhibits great variation and includes many types of palm, scrub, and transitional *bajos* (Garrison 2007). Using pollen data collected by Nick Dunning from nearby Bajo Mahunche (4.5 km to the south of the site) as a model, the vegetation in and around the *bajos* that surround San Bartolo includes palo de tinto (*Haemotoxylum campechianum*), *Bursera*,

Spondias, and *Pachira*, sedges (*Cyperaceae*), breadnut trees (*Moraceae*), pucte trees (*Combretaceae*) and sawgrass (Dunning *et al.* n.d.).

Fauna

The northeast Petén is inhabited by an extremely wide range of animals, some of which I will touch on here. Most animals exploit both the upland forests and lower *bajo* environments depending on the season, which affects both the availability of water and the tree cover, particularly in the *bajos*. Mammals that have the most apparent presence include spider and howler monkey, jaguars, peccaries, pacas (large rodents), pumas, and tapirs. A great number of reptiles reside in the northeast Petén, including rattlesnakes, fer de lance, and coral snakes. A wide range of spiders, scorpions and insects inhabit the jungle as well. Marine and lacustrine resources would have been abundant at some central lowland sites, but were not readily available to the San Bartolo community. Ashley Sharp (2009) conducted a formal osteological analysis on the San Bartolo faunal remains collected between 2002 and 2007. While she established some interesting and sometimes unexpected variation through time and space, the work broadly established that peccary, white-tailed deer, and dog were found in the greatest quantities, followed by fox, turtle, birds, and rodents. Among the other fauna recovered were ocellated turkeys, pacas, and opossums. (Sharp 2009: Table 3).

Natural Resources

The jungle and surrounding *bajos* would have provided the ancient Maya of San Bartolo any number of abundant resources. As illustrated by Sharp's (2009) study, the forest provided an array of food resources for the ancient Maya. In addition to faunal resources, many local trees are fruit-bearing, including *Talisia olivaeformis* (guaya) and *Manilkara achras* (chico zapote) (Mutchnick and McCarthy 1997).

Population pressure, drought, deforestation and the ultimate outcome for the Classic Maya aside, firewood is produced in abundance by the deciduous forests of the Petén. In a study by Mutchnick and McCarthy (1997), informants from the modern towns of Uaxactun and Caoba reported that *Manilkara achras* (chico zapote) and *Pimenta dioica* (allspice) are slow-burning and quite useful for cooking fires. However, it should be noted that other tree species, like mahogany (*Swietenia macrophylla*) and cedar (*Cedrela odorata*) would have provided abundant firewood for the ancient Maya, but today are being rapidly depleted from the effects of modern logging activity across much of the Petén.

Two important resources available in the Petén are clay and limestone. Although no clay sources have been found in or around San Bartolo to date, the clay-rich soil is a testament to the fact that this resource was abundantly available to the community. There was also no shortage of limestone to the inhabitants of this region. The area rests on a giant limestone shelf that is often accessible from the surface or can be accessed from exposed outcrops. Limestone, while it hardens over time, is

relatively soft when first exposed. As such, it can be cut more easily than other stones, but still makes for excellent building material. Limestone was also used by the ancient Maya to make plaster, a process that entailed burning it at temperatures of over 1400°F (Hansen 2000). At San Bartolo, limestone was abundantly available. Garrison (2007) reports that 32 limestone quarries were found in the San Bartolo-Xultun intersite area.

One of the most important resources for the San Bartolo community was chert. Chert is an excellent material for flintknapping and the stone tools manufactured from it have a sharp, but strong cutting edge. Chert was available in many parts of the Petén, but in varying quantities and qualities. At San Bartolo, while the chert may not be the finest in the region, it can be said with certainty that it was abundantly available. Kwoka (2006) discovered several large workshops in the San Bartolo site core along with two quarries in the peripheral zone around the site. In addition, excavations at San Bartolo, Xultun, and the intersite area exposed an abundance of man-made piles of chert cobbles (Kwoka and Griffin 2005). These rather enigmatic features, 280 in total, which may have been related to agricultural activity (Garrison 2007), illustrate the availability of this important resource.

San Bartolo and the Rise and Fall of Cities Across the Lowlands

San Bartolo was discovered by William Saturno in 2001 (Saturno *et al.* 2006). With the eighth field season of the San Bartolo Regional Archaeological Project now complete, investigations are starting to shed light on the site's turbulent occupational

history. It is clear from the research conducted thus far that San Bartolo experienced its peak of construction during the Late Preclassic (400 B.C. - A.D. 200), followed by a hiatus of occupation that lasted for at least 400 years, and a subsequent reoccupation at about AD 600.

The following discussion provides an chronological overview of this history by presenting the data that has been recovered from excavations at San Bartolo and then situating this data by discussing the finds from key sites across the region. Some of the major Maya sites in the area around San Bartolo include Xultun, Rio Azul, Uaxactun, Holmul, Tikal and El Mirador (**Fig. 2.3**). Xultun, located about 8 km to the southwest, was by far San Bartolo's closest urban neighbor. Rio Azul, Uaxactun, and Holmul are three major sites that flank San Bartolo to the northeast, southwest, and southeast, respectively. They are each about 25-30 km from the site. As such, archaeological and reconnaissance data recovered from Xultun, Rio Azul, Uaxactun, and Holmul can provide a window into relatively local phenomenon occurring around San Bartolo. Tikal and El Mirador were somewhat more distant from San Bartolo, but each of these sites experienced eras during which their hegemonic influence over the region was quite extensive, and the political and economic history of the San Bartolo community was certainly affected by its general proximity to these two powerhouses.

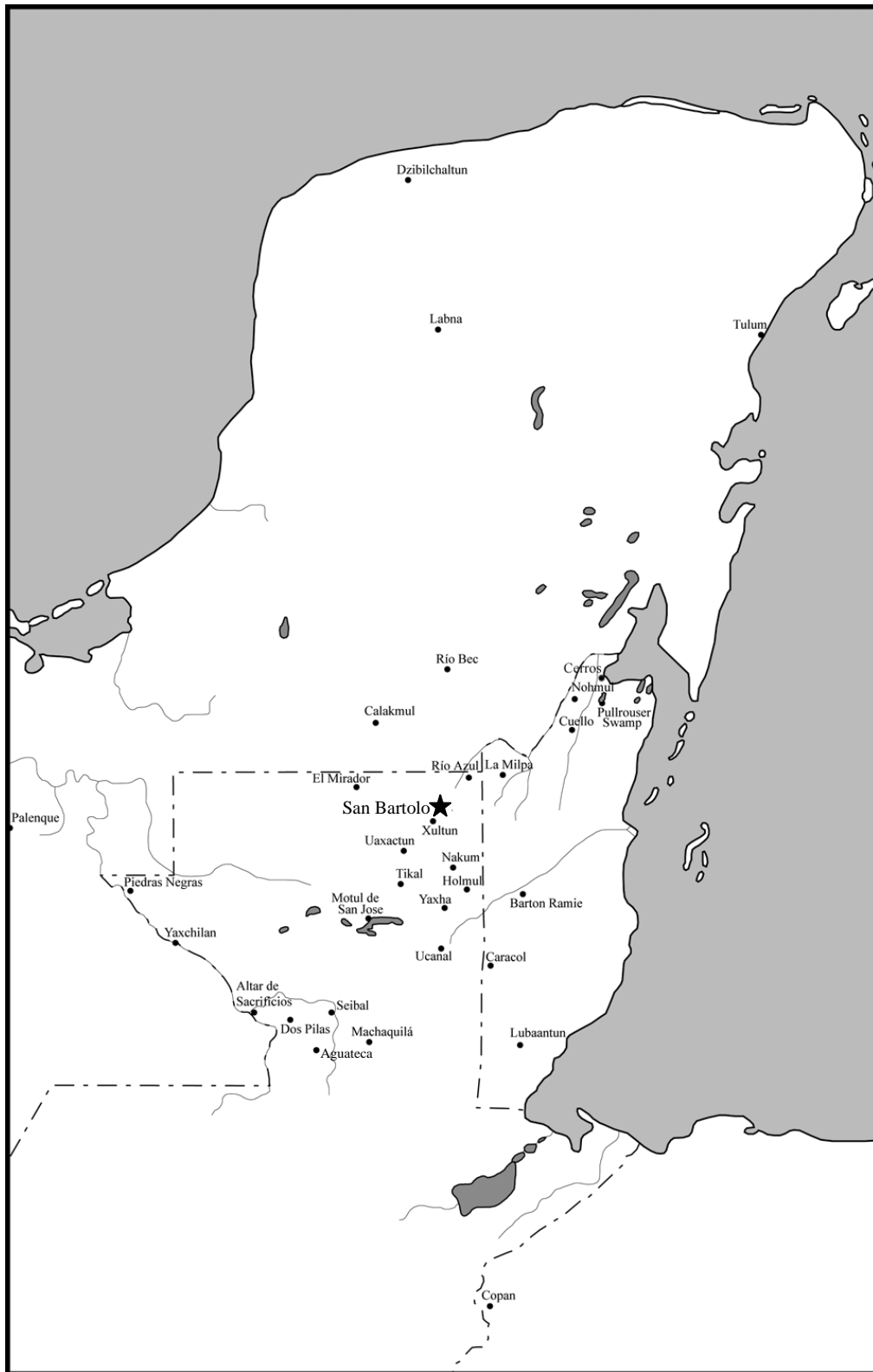


Fig. 2.3: The Maya Area (adapted from Garrison 2007: Figure 2.1)

Middle Preclassic Beginning (1000-400 B.C.)

San Bartolo was first occupied during the Middle Preclassic. In the Maya lowlands, this is a period when agriculturally-based villages were established across the region. During the course of the Middle Preclassic, many sites clearly developed from simple farming communities into large villages complete with public architecture. This is often when sacred space was first defined at many sites, as pyramid excavations across the region have exposed Middle Preclassic components to structures that were used and rebuilt somewhat continuously for the next 500, 1000 or 1500 years.

For example, the earliest phase of Las Pinturas (Sub-7) dates to the Middle Preclassic period. Ixquik is a small east-west structure that measures 4.5 m along the N-S axis and 6 m along the E-W axis (Beltrán and Roman n.d.). Excavations at the Las Ventanas pyramid (Urquizú 2003) exposed a Middle Preclassic phase structure, Bak Na. A spondylus shell was recovered from this excavation and, as Garrison (2007) points out, this suggests that even at this early date, San Bartolo may have been part of a far-reaching trade network. Mamom phase pottery has found at most of the major Late Preclassic structures across the site, including Las Pinturas, Las Ventanas, and Los Saraguates (Castillo 2006; 2008). At the Jabalí Group, several exquisite Middle Preclassic vessels were used as offerings in Late Preclassic Burial 4 (Fig. 2.4).



Fig. 2.4: Mamom Phase Vessel Recovered From Burial 4 at Jabali

While the architectural and ceramic evidence indicates that San Bartolo supported a significant population, or at least one large enough for the construction of public architecture, recent investigations by Nick Dunning and his colleagues (Dunning *et al.* n.d.) has indicated that intensive farming had not yet begun during the Middle Preclassic. Palynological investigations at various *bajos* and *aguadas* in the area around San Bartolo show “minimal disturbance taxa,” like grasses, that would suggest forest clearing for agricultural practices (Garrison and Dunning n.d.).

The Middle Preclassic was a period during which many other sites in the region also supported a population substantial enough to result in the construction of public structures and platforms, indicating that these respective communities had come under some kind of centralized authority and control. At Nakbé, a number of important architectural features were built during this time period, including an E-group, a ball court and several causeways (Hansen *et al.* 2008). Furthermore,

excavations particularly in Late Preclassic structures have recovered mass quantities of Middle Preclassic Ox pottery (Hansen *et al.* 2008). At Rio Azul, in as early as 500 B.C. a 5 m high ornately decorated platform (G-103 sub 2) was constructed (Adams 1999). At Holmul and Cival, excavations have yielded evidence that “massive construction projects” in the form of large plastered areas were undertaken as early as 800 B.C. (Estrada-Belli 2007: 73).

Late Preclassic Apogee (400 B.C. – A.D. 200)

Excavations at San Bartolo have established that the site reached its apogee during the Late Preclassic period. Generally speaking, the Late Preclassic period marks the emergence of statehood in the Maya lowlands. This was a time period when some large villages became bustling cities. This shift is marked by the construction of monumental architecture, the development of writing, and the presence of state religion and government under the direction of a king. At San Bartolo, the vast majority of its large buildings, including Las Ventanas, Las Pinturas, the Palace Tigrillo, Los Saraguates, Las Plumas and the Jabalí group were first constructed during the Late Preclassic. The site’s Main Plaza, measuring over 100 m in length, and small ballcourt were also built during this period.

Late Preclassic Chicanel ceramics have dominated the site-wide assemblage recovered from every excavation season thus far. For example, sherds of this phase accounted for about 60% of the total assemblage in 2005 (Castillo 2005), 65% in 2006 (Castillo 2006) and 55% in 2008 (Castillo 2008). Furthermore, the ceramic

technology of the Late Preclassic period at San Bartolo has been described by the project ceramicist as showing more variation than any other period of occupation at the site. She has also suggested that San Bartolo employed specialized groups of potters for the manufacture of functionally and aesthetically discrete ceramics (Castillo n.d.).

The pyramid Las Pinturas has a total of nine construction phases, the final eight of which were built in the Late Preclassic. The penultimate phase of the building (Pinturas Sub-1) houses the exquisitely rendered murals for which the site is most well known. The implications of the murals are far-reaching and have been discussed at length elsewhere (Saturno *et al.* 2005). For the purposes of this discussion, however, the murals speak volumes about the nature of Late Preclassic occupation at San Bartolo. For example, the images rendered along the West Wall suggest that San Bartolo was ruled by a king during this period (Saturno 2003) (**Fig. 2.5**).

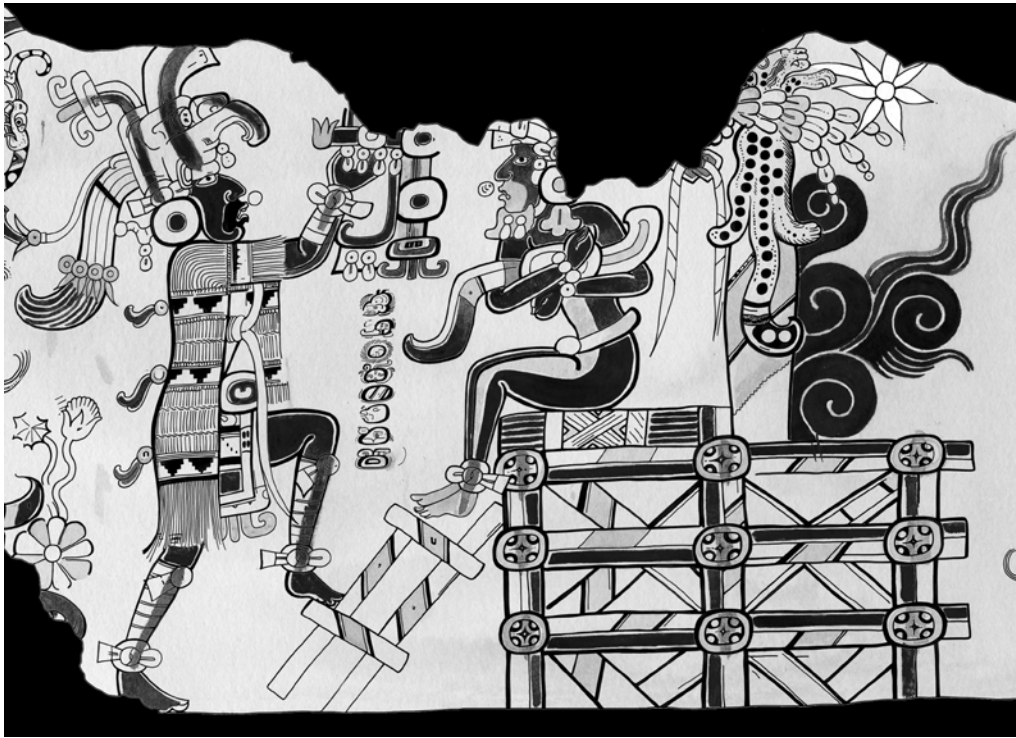


Fig. 2.5: West Wall Coronation Scene (drawing by Heather Hurst)

The exquisite nature of the murals and clear level of expertise with which they were rendered suggests that they were done by a specialized group of artisans (Hurst 2009). Some very early examples of glyphs were found on the West Wall of Las Pinturas (Fig. 2.5). Even earlier glyphs found in Pinturas Sub-5, which were AMS dated to approximately 300-200 cal B.C. (Saturno *et al.* 2006). This is the earliest example we have thus far of securely dated Maya writing recovered in situ. The significance of their presence in terms of whether or not they somehow set San Bartolo apart from other Late Preclassic sites is difficult to assert, but the glyphs certainly indicate that the king was resourceful enough to employ a scribe at a time when this skill set was probably a very unique one to have. Furthermore, depictions of Hunahpu, the Principal Bird Deity, and the Maize God on the murals in forms that recall those

found at other sites across the Maya area suggest the San Bartolo community practiced a kind of standardized state-religion that celebrated strong ideological ties to the mythical past. The content and nature of these renderings, along with the boom in monumental construction that occurred during the Late Preclassic at San Bartolo, illustrate a level of complexity and centralized authority that characterized a number of other sites across the lowlands at this time.

For example, El Mirador was clearly the major political center in the region during the Late Preclassic. This is established by the sheer size of the site and thereby the conspicuous use of labor and resources that would have been required to complete the construction of the site core (Sharer 1992). The site encompasses an area of approximately 16 square km with a center comprised of a complex system of ceremonial groups, elite residential compounds, reservoirs, and causeways (Fowler *et al.* 1989). The Danta Complex, measuring 70 meters from the base to the summit, is the largest architectural group at El Mirador and the biggest construction project ever completed by the ancient Maya (Sharer 2006). At Cerros, Structure 5C-2nd, a large Late Preclassic platform flanked with four ornate masks, provides clear evidence for what Demarest (2004) has called the “theater state.” This elaborately carved structure was astronomically aligned and was designed so that an individual, presumably a king, who was standing atop the central platform would metaphorically be situated in the center of the universe (Freidel and Schele 1988). At Tikal, construction began on two massive structures during the Late Preclassic: Mundo Perdido and the North

Acropolis. The latter contains a number of Late Preclassic tombs and possibly that of the founder, Yax Ehb Xook (Martin and Grube 2008).

Early Classic Abandonment (A.D. 200-600)

In contrast to the evidence for a thriving Late Preclassic occupation at San Bartolo, investigations at the site have failed to reveal a substantial Early Classic presence. During the eight field seasons at San Bartolo, no residential or public Early Classic structures have been found. Furthermore, all excavations have recovered either very low percentages or a total absence of sherds dating this period. For example, of the entire slipped sherd assemblage recovered in 2005, only 1.3% of them were Early Classic. Of the unslipped sherds recovered from the same year, only 5% of them were Early Classic (Quintal). And of this 5%, many were recovered from sealed Late Preclassic/Chicanel contexts and thus are more aptly described as an extension of the Late Preclassic than as a distinct Early Classic phenomenon (Castillo 2005).

Work by Nick Dunning and his colleagues (Dunning *et al.* n.d.) has established a correlating hiatus from paleoenvironmental investigations in and around San Bartolo. At the Aguada San Bartolo, a reservoir measuring 16-20 m across that is located just to the northwest of the Las Ventanas Group, excavations exposed a pattern in the relative accumulation of sediments that supports abandonment during the Early Classic. Palynological and sediment data from excavations at the Bajo

Donato, located 6km from San Bartolo, further supports a hiatus of occupation during the Early Classic.

San Bartolo is in fact one of many sites in the Petén that experienced a phase of decline and virtual depopulation during the Early Classic. The Early Classic period in the Maya area and Mesoamerica as a whole is best defined by shifts of power and new interactions across the entire region. Power vacuums created by the decline of some sites during the close of the Late Preclassic opened new opportunities for the consolidation of political control and resources at other sites, of which the most prominent was Tikal.

In the Maya lowlands, the decline and subsequent abandonment of sites in the Mirador Basin of Guatemala at the end of the Late Preclassic (Hansen *et al.* 2008) had a profound effect on the balance of power and the redistribution of resources across the Maya region. Evidence for the site's decline is abundant. There is no evidence for monumental architecture dating to the Early Classic at El Mirador or any of the major sites in the Mirador Basin (Hansen *et al.* 2008). Pollen evidence also indicates that after the Late Preclassic there was a dramatic decline in the presence of maize and a correlating increase in native tropical plants (Hansen *et al.* 2008). It seems that the fate of the Mirador Basin residents was somewhat self-inflicted. Massive construction projects, pottery manufacture, and the general support of the population required an incredible amount of firewood. Hansen and his colleagues have suggested that the systematic deforestation of the Mirador Basin resulted in surface erosion and the filling of the *bajos*, the community's primary source of water

(Hansen *et al.* 2002). Consequently, the region would have become inhospitable both for humans and the crops they needed for survival. To exacerbate this issue, there is strong evidence for drought at the end of the Late Preclassic (Gill 2000; Wahl 2005).

During the Early Classic aftermath of the Mirador Basin decline, central lowland sites like Tikal, Uaxactun, and Rio Azul, which were small centers during the Late Preclassic, increased in population and became major centers. Tikal witnessed a consolidation of power during the Early Classic, as is indicated by the continued expansion of the site's civic-ceremonial core, particularly the North Acropolis (Coe 1965, 1990). A number of important carved monuments bearing Tikal's emblem glyph, Long Count dates, and depictions of the important kings, namely Stela 29 and the Leyden Plaque, also date to the Early Classic period (Shook 1960). At Uaxactun, while some important structures like E-VII-sub were constructed during the Late Preclassic, it is during the Early Classic that the population at the site increased significantly, as exhibited by the construction of monumental architecture and the recovery of abundant Tzakol pottery (Smith 1955). Rio Azul also experienced a construction boom during this time period and excavations in the site core yielded vast quantities of Tzakol ceramics and the elaborate Rio Azul tombs (Adams 1999). Adams (1999) reports that at least 692 of the 729 buildings at Rio Azul were erected between A.D. 393 and 530.

There is also strong evidence for interaction with the city of Teotihuacan during the Early Classic at Tikal. This time period marks the florescence of this central Mexican city, as evidenced by the completion of the site's major

constructions, the Pyramid of the Sun, the Pyramid of the Moon, and the Temple of the Feathered Serpent, by A.D. 200 (Sugiyama and Castro 2007), and subsequent expansion of influence across Mesoamerica, including the Gulf Coast and the Maya area (Rattray 1988). The nature of Teotihuacan-Tikal Early Classic interaction has been highly debated. The relationship between Teotihuacan and Tikal is suggested by the discovery of rich graves like Burials 48 and 10 containing central Mexican offerings (Shook and Coe 1961; Coe 1965) and the discovery of carved images, like Stela 31 (Coe 1965) and Stela 32 (Moholy-Nagy 1962). While evidence for *talud-tablero* architecture, generally associated with central Mexico, was found at the Mundo Perdido Complex, Laporte (2003) notes that it pre-dates the period of formalized interaction between the two sites. He suggests this is evidence for the cosmopolitan nature of Terminal Preclassic Tikal. While some texts indicate that Tikal's Early Classic king, Yax Nuun Ayiin I, was from Teotihuacan (Stuart 2000), recent strontium isotope evidence from the king's tomb do not support this (Wright 2005). This does not, however, negate the strong connection that Yax Nuun Ayiin had with the central Mexican city, which is clearly established from his depiction on Stela 31. While the exact nature of the Teotihuacan-Tikal connection continues to be discussed, the evidence unequivocally establishes that the two cities had strong economic, political, and perhaps ideological ties. At Rio Azul as well, Teotihuacan-style pottery that has been recovered from several elaborate Early Classic tombs in the site core suggests a strong connection to the central Mexican site (Adams 1990).

It is not surprising that smaller sites like San Bartolo would have been profoundly affected by these major environmental, political, and economic shifts occurring across the lowlands during the Early Classic period. San Bartolo is situated about 40 km northeast of Uaxactun, 60 km northeast of Tikal, and 90 km southeast of El Mirador. The occupational histories of these sites, given their relative proximity to San Bartolo, provide some scenarios that could explain the site's abandonment during the Early Classic.

As discussed above, due to the paucity of rivers and lakes in the immediate vicinity, the San Bartolo community would have relied on the *bajos* as their main source of water. Were these *bajos* to be compromised in some way, it would have been devastating for the San Bartolo community. Dunning *et al.* (n.d.) has found direct evidence that at around A.D. 100, erosion from clearing was causing the nearby Bajo Donato (6 km northeast of San Bartolo) to fill up with soil. Subsequently, the farmers employed terraces along the southern edge of the *bajo* to compensate for this, but by A.D. 150 the area was abandoned. Indeed, San Bartolo is situated in a fragile environment and the filling in of these *bajos*, as is suggested by paleoenvironmental data, along with a possible drying trend, would have been just as catastrophic as it was for El Mirador.

Tikal is located in a similar environment and yet reached a period of florescence, rather than decline, during the Early Classic (Coe 1965). However, it should be noted that drought would have had varying effects across a given region, particularly among the *bajos* environments (Garrison 2007). The success of Tikal

may have also been related to their employment of a complex approach to water catchment. There is evidence that the community switched from a system of “passive” water management during Late Preclassic to one that involved the altering of the landscape and the construction of an elaborate web of reservoirs and canals during the Classic period (Scarborough 1998: 139). While excavation and survey at San Bartolo have revealed a number of reservoirs in association with Late Preclassic architecture across the site, work done thus far has not provided evidence for a water management system on par with that of Tikal’s. As such, San Bartolo’s Early Classic abandonment could very well be related in some way to climatic changes combined with the gradual destruction of the *bajos*.

Environment and resources may not have been the only factors that contributed to San Bartolo’s Early Classic abandonment. While there is no evidence for direct trade relations between El Mirador and San Bartolo, the collapse of the Mirador Basin sites would have created an economic void across the region. Reese-Taylor and Walker (2002) have asserted that the disruption of trade networks caused by the decline of El Mirador affected a vast area across the lowlands. It is highly plausible that this would have created enough economic instability in the region to cause the depopulation of some sites, including perhaps San Bartolo. For example, Cerros, a powerful and strategically located Late Preclassic center that could have occupied an important niche in this trade network, entered in to a phase of decline by about A.D. 200 (Scarborough and Robertson 1986; Walker 1998). Indeed, the complex Petexbatun trade networks centered on the Pasión and Usamacinta Rivers

contributed to both the rise and fall of sites in this region (Demarest 2004). With the collapse of El Mirador, San Bartolo may have been one of the many sites that lost its economic position in the region. This factor, combined with environmental degradation, would have pushed the San Bartolo community out, much like the residents of the Mirador Basin. Garrison (2007) has suggested that a large portion of San Bartolo community relocated south to nearby Xultun. There is evidence for a significant population at this neighboring site in the form of several Early Classic carved stela, one of which names the 33rd ruler of the Xultun (von Euw 1978). While published material is not available at this time, current excavations at Xultun under the direction of William Saturno will certainly provide further insight into the nature of the Early Classic period at this important site.

Late Classic Return (A.D. 600-800)

While nearby sites like Xultun (von Euw 1978), Tikal (Coe 1965), and Uaxactun (Smith 1950) experienced a period of architectural florescence during this period, it is apparent that at San Bartolo construction activity related to larger structures was characterized by recycling, remodeling, and renovating pre-existing buildings. This behavior is evident at the Palace Tigrillo (Runggaldier 2009), the pyramid Las Ventanas (Urquizú 2005), and the elite residential compound Las Plumas (Ortiz and Mencos 2004, 2005). Survey (Griffin and Kwoka 2005) and limited excavations (Davies 2005; Craig 2005) suggest that the site is replete with Late Classic housemounds, although no population estimates are available at this

time. Formally excavated Late Classic housemounds include Structures 82, 83, and 84 (Pellecer Alecio 2003), Group 157A (Craig 2005) and Structure 38 (Davies 2005). Paleoenvironmental work by Dunning and his colleagues (Dunning *et al.* n.d.) has shown that the Late Classic community of San Bartolo dredged and reused the *aguada* located near the Las Ventanas group. During this time period there is abundant evidence for ritual behavior at San Bartolo, as is illustrated by excavations at Structure 63 (Craig 2004) and structure façades across the site. This will be addressed in more detail in subsequent chapters.

In order to better understand the nature of the Late Classic reoccupation at San Bartolo, it is important to address the larger social and political climate in the lowlands at the time. The Late Classic, much like the period that came before it, was a time of upheaval and change. It is generally accepted the northeast Petén experienced a decline during this time (Adams 1999; McKillop 2004; Sharer 2006). Evidence for a hiatus at Tikal is evidenced by very limited monumental construction and total lack of carved monuments manufactured between AD 562 and 692 (Martin and Grube 2008). This decline certainly correlated with the rise to power of Tikal's long time rival Calakmul, by whom they were defeated in A.D. 562. Rio Azul, a prominent site in the Early Classic and likely under the control of Tikal (Adams 1999), was intentionally destroyed at around A.D. 530. Excavations at the site yielded evidence for the burning of palaces, the desecration of tombs, and the destruction of stela (Adams 1999). Uaxactun experienced a similar decline, as evidenced by a lack of carved monuments between A.D. 557 and 702 (Martin and

Grube 2008). These events are somewhat symptomatic of this time period, not just in the lowlands, but elsewhere in Mesoamerica. At around A.D. 600 Teotihuacan, a major force in the region and ally of Tikal, also entered into a phase of decline. There is evidence for massive burning within the civic-ceremonial core of the site and a subsequent population decline across central Mexico (Sharer 2006).

During the 7th century A.D., San Bartolo was one of many sites in the northeast Petén that experienced some degree of population resurgence. According to Adams (1999: 174), “The renewal of urban life in Rio Azul was a part of the general phenomenon of renewal among the battered and bruised cities of the Classic Lowlands.” At nearby Xultun, extensive construction projects were undertaken during the Late Classic, including the expansion of Group A, a massive architectural complex that includes a number of pyramidal structures (Garrison 2007). At Tikal, the powerful Tikal king, Jasaw Chan K’awiil I, “brought down the flint and shield” (Martin and Grube 2008) of the Calakmul king in A.D. 695, initiating a new era of prosperity for the site characterized by massive construction projects, including the construction of five massive pyramids (Temples I-V).

While Tikal reached a kind of golden age during the second half of the Late Classic, many other sites in the region, including San Bartolo, experienced only moderate population resurgence. For example, people clearly returned to Rio Azul by the end of the 7th century, but most construction projects were generally focused on refurbishing existing structures. This is illustrated by Structure A-11, a palace structure atop which sits a 300 sq m plastered courtyard surrounded by a series of

rooms, which was constructed directly above an older building that was entirely filled in. It should be noted that Adams (1999) has suggested there was a large rural population living around Rio Azul at this time, perhaps 205,000 people in a 177 sq km zone (BA-20) to the north of the site.

At most sites in the Mirador Basin, including El Mirador, Nakbé, and Tintal, small communities return after 500 years of virtual abandonment (Hansen *et al.* 2008). This is supported by pollen data that indicates agricultural activity, the execution of some minor construction projects, and evidence for ritual behavior (Hansen *et al.* 2008). The ceremonial activity that accompanies this reoccupation of the Mirador Basin is especially pertinent to the San Bartolo data and will be discussed in more detail in Chapter VI.

Terminal Classic Abandonment (A.D. 800-900)

It is apparent that San Bartolo was largely abandoned sometime during the Terminal Classic period. This is supported by both architectural and ceramic data from excavations across the site. There is absolutely no evidence for any architectural activity, remodeling or otherwise, after A.D. 800-900. This final phase has often been dated by the presence of Tepeu sherds. At Uaxactun, this phase is divided into three periods: Tepeu 1, 2 and 3. Applying these finer categories at San Bartolo has been problematic thus far. This is partially due to the fact that a large proportion of the Tepeu assemblage (about 40% - see Chapter IV) at San Bartolo is comprised of unslipped sherds of the Cambio Group. Sabloff (1975: 16) describes

the differences between unslipped Tepeu 1, 2, and 3 sherds at Uaxactun as “neligible.” Furthermore, other predominant Tepeu types, like Tinaja, are found in both the Late Classic and Terminal Classic periods, and can be very difficult to discern chronologically. At Seibal, the Tinaja Group spans the period from about A.D. 650-900 (Sabloff 1975). This ceramic group makes up about 35% of the Tepeu assemblage at San Bartolo. Therefore, about 75% of the Tepeu assemblage recovered from excavations at San Bartolo is made up of these two chronologically generic ceramic groups. It is for this reason that we generally do not make the distinction between Tepeu 1, 2 and 3 at San Bartolo. That said, Tepeu is the latest chronological phase that has been identified by ceramics at the site. While a handful of sherds from the subsequent Postclassic period has been recovered at San Bartolo over the years, in no context were they significant enough to be reported in the annual *Informes* (Urquizú and Saturno 2002 - 2008). Therefore the ceramic data indicates that at this point the latest possible phase of activity and occupation in the site core is the Terminal Classic. After this period, the site was largely abandoned. This Terminal Classic exodus is part of a larger pattern that we see across the Maya lowlands at this time.

The end of the Late Classic and the Terminal Classic periods corresponds with what has commonly been referred to as “The Maya Collapse.” This “collapse” is now known to signify the de-unification of the Maya state, which did not actually entail the decline of every Maya site, nor every region. For example, while the Petén was generally undergoing a dramatic population decline during the Terminal Classic,

a number of sites in Yucatan and Belize, including Uxmal, Sayil (Smyth *et al.* 1995), and Yaxuna (Suhler *et al.* 2004), Lamanai (Pendergast 1981), and Caracol (Chase and Chase 2004) experienced population increase, significant monumental construction activity, and sometimes a peak in occupation. To further complicate the picture, not all Petén sites were abandoned during this time. Seibal, for example, experienced a boom in architectural projects during the Terminal Classic (Sabloff 1975; Tourtellot and González 2004). It is for this reason that Demarest (2004) and others aptly prefer the term, “transformation” over collapse.

In an effort to understand the events and processes that most strongly influenced the abandonment of San Bartolo in particular, the following discussion will focus on characterizing the nature of the Terminal Classic in the southern and central lowlands. “Decline” refers to the process of gradual decimation and general abandonment that characterizes the history of many lowland Maya sites during the Late Classic period. Potential factors that contributed to this phenomenon include the depletion of resources, or population pressure, widespread warfare, the weakening or obliteration of critical long-distance trade networks, and drought. While some scholars have asserted that there must have been a “prime mover” in this scenario (e.g. – Gill 2000) I would argue that large scale decline across the lowlands can be best attributed to the gradual dismantling of a delicate ecological and cultural system.

Deforestation was undoubtedly a factor in the decline of many Maya sites across the lowlands. As with the decline at the end of the Late Preclassic period, with an ever-increasing focus on major construction projects, which required the burning

of limestone to create plaster, the Maya were consuming vast amounts of wood. The consequences of deforestation on the local population involved not only the reduced availability of trees for burning and construction, but the resulting degradation of the soil system. Without the protection of the forest canopy soil in upland areas would have eroded away, while sedimentation would have occurred in the low-lying areas that were necessary for water catchment. There is an enormous body of literature that addresses these processes and their consequences for specific regions in the Maya area (e.g. – Dunning *et al.* 1998; Pohl *et al.* 1996; Rice 1996; Shaw 2003).

There is abundant evidence that a series of droughts affected sites in the Maya lowlands during the Terminal Classic period, a phenomenon that has also been well-addressed in the literature (e.g. – Dahlin 1983; Gill 2000, Gill *et al.* 2007, Hodell *et al.* 1995; Leyden *et al.* 1996). While the entire Maya area was affected, a dramatic reduction in annual rainfall would put central lowland sites in particular under a great deal of stress. As I have discussed above, there was a dearth of rivers and lakes in the region. Not only that, but the central lowlands are generally located high above the water table. As such, many Maya communities would have been reliant on *bajos* and systems of water catchment (e.g. – Scarborough 1998). Shaw (2003) points out that the proximity to the water table could explain why many northern lowland sites in the Yucatan endured drought much better than their neighbors to the south, despite the fact that it would have been equally if not more dry in this region during these times. Periods of intense aridity in the central lowlands would have compromised both the

use of *bajos* and reservoirs to supply water to the population, creating a disastrous scenario for these communities.

During the last half of the Late Classic and into the Terminal Classic periods, widespread warfare was endemic across much of the southern and central lowlands. Evidence for warfare during this time abounds in Maya archaeology, epigraphy and art. For example, the Bonampak murals, which adorn the three rooms of Structure 1, provide a vivid rendering of events surrounding warfare in the lowlands. Deforestation and drought certainly exacerbated the violence by increasing the competition for resources across the lowlands.

Some of the best examples of this climate of violence can be found in the Petexbatun region of central Guatemala. There is evidence for varying levels of fortification at Dos Pilas, Aguateca, and Punta Chimino. Punto de Chimino presents perhaps the most extreme example. The site is located on a natural peninsula, which provided a degree of protection in and of itself, but the Late Classic Maya removed over 38,000 cubic meters of rock (Martin and Grube 2008) to create a series of ditches that effectively prevented access to the site. Maya texts indicate that at Dos Pilas the year A.D. 761 marked the end of the site's influence over the region, when Ruler 4 was captured and sacrificed by an unknown party (Houston 1993). Household excavations at the site of Aguateca, Guatemala, have yielded evidence for a rapid abandonment as a result of enemy attack at the end of the Late Classic period (Inomata and Stiver 1998). Evidence for this includes the presence of *metates*, large ceramic vessels, and, most significantly, valuable portable items *in situ*.

Sites in the northeast Petén, including San Bartolo, have not yielded overt evidence for warfare like that which we find in the Petexbatun region. Rather, the decline of Maya sites in this region is usually expressed by the gradual depopulation of sites. Evidence for this process includes the cessation of architectural programs, including the erection of dated monuments. The last dated stela at a given site tends to provide some absolute timing for the beginning of the end for that community. For example, Tikal, after witnessing a century characterized by massive construction projects and political sway, experienced a hiatus in the erection of stela between 810 and 869, by which time the site was clearly experiencing decline and depopulation (Martin and Grube 2008). Stela 11, carved in A.D. 869 is the last inscription we have from Tikal. Uaxactun's Stela 12, which dates to A.D. 889 and Xultun's Stela 6, which dates to A.D. 899, were the final carved inscriptions produced at these two lowland sites (Valdés and Fahsen 2004).

Population estimates from major sites in the general vicinity of San Bartolo provide further evidence for abandonment. For example, work by Adams *et al.* (2004) in the Three Rivers Region, which encompasses sites like Rio Azul and La Milpa, indicates that the region experienced a population decline in the order of about 50% during the Terminal Classic period. At Tikal, estimates by Culbert *et al.* (1990) suggest that between the end of the Late Classic and about A.D. 850 the site had experienced an 80% population decline. Demographic studies at Calakmul suggest that the site was depopulated by 90% during the 9th century A.D. (Braswell *et al.* 2004).

There is other evidence that sites in the northeast Petén were declining. For example, pollen data from the Late Classic Mirador Basin site of Zacatel indicate that at around A.D. 840 the forest returned to the area, indicating that the site had become virtually unoccupied (Hansen *et al.* 2002). In a study done by Suhler and Freidel (2003), they revisited Tikal Report 14, which described the excavations in the North Acropolis conducted by the University Museum Project under W. Coe. Using this report, they reinterpreted Coe's "problematic deposits," as termination features. The termination events, they suggest, represent a final desecration of Tikal before abandonment in the Eznab phase, or Terminal Classic period.

It should also be noted that as environments and political structures were declining, so too were the religious and social norms of communities across the Maya central and southern lowlands. Maya kings in particular were considered to be sacred and divine beings and were expected by the populace to utilize their self-professed direct line to the gods to maintain the harmony in which the community lived (Freidel and Schele 1988; Schele and Miller 1986). Such events as drought would have led the lower classes to lose faith in the king and the result would have been the eventual decimation of the social hierarchy and the balance of power that had held the Maya state together for so many centuries. Indeed, Webster (2002: 320) suggests the "ideological crisis" that was occurring across the Maya area during the Terminal Classic period undoubtedly exacerbated the situation. Valdés and Fahsen (2004) provide a graphic illustration of how just such a crisis manifested itself in the burial customs at Tikal. Rather than being formally interred within architecture, burials

have been found on top of floors, staircases, or in rooms. They were often covered with stones, but sometimes haphazardly, and in one case, the individual's cranium had been left uncovered in prehistory. The image of a partially exposed corpse that had been allowed to remain on public architecture is certainly one that indicates a certain level of chaos and societal breakdown.

Returning to San Bartolo, the data presented above from other sites in the vicinity provide ample clues for why the community may have left in the Terminal Classic. Deforestation could have been an important factor. Indeed, as I shall discuss at more length in Chapter V, paleoenvironmental investigations by Nick Dunning (personal communication 2009) have provided clear evidence for forest clearing in the area around San Bartolo during the Late Classic. In regards to drought, we can assume that the community was impacted just as much as others across the lowlands. It should also be reiterated that the San Bartolo community would have suffered considerably in the face of reduced rainfall because of their reliance on reservoirs and *bajos* to obtain their water supply. The cessation of carved monuments at many of the major sites that neighbored San Bartolo, including Tikal, Uaxactun, and Xultun, provides an indication of the regional scale of abandonment. Finally, the demographic estimates that suggest the depopulation of sites like Tikal may well parallel the abandonment of San Bartolo at about the same time.

It should also be noted even if the San Bartolo community had been able to endure the effects of drought and deforestation during the Terminal Classic, another consequence of the abandonment of many major sites across the Petén would have

been the disruption of the larger system of trade and alliances across the region. Demarest *et al.* (2004) have attributed the decline of many sites along the Pasión and Usamacinta Rivers to not only endemic warfare, but also the degradation of trade networks centered on the rivers. San Bartolo must have been profoundly impacted by the abandonment of powerful Late Classic sites like Tikal and Xultun, which were sites that San Bartolo was likely reliant on to some degree for resources or protection. Add a major decrease in annual rainfall to fact that society itself was collapsing, and it is abundantly clear why the Terminal Classic community of San Bartolo decided to leave the city.

Theoretical Setting

Ritual Behavior and the Making of Offerings

Scholars in religious studies, social anthropology, and archaeology have long tackled the issue of fully understanding the definitions, motivations, and expectations of ritual behavior. In grappling with this issue, it is essential to separate what ritual *is* from what ritual *does*. In defining what ritual actually is, and for the purposes of this discussion of ritual behavior in archaeology, it is important to distinguish between two very different notions of the concept. There is a set of so-called ritualized behaviors that involve the repetitive, mundane and “thoughtless” (Bell 1992) acts in which we all take part. For example, one may tend to have a “morning ritual.” There are also rituals that can be defined as sets of symbolic acts that are performed in accordance with some larger belief system. These are two vastly

different concepts, only the latter of which will be discussed here. This is not to suggest that those mundane rituals are not cultural, for they most certainly are. Nor are they meaningless, but they are lacking in meaning relative to those rituals that are connected to larger notions of religion, the supernatural or superstition.

The Oxford dictionary defines “ritual” as, “a religious or solemn ceremony involving a series of actions performed according to a set order.” This “series of actions” is an important aspect of ritual and implies that a ceremony is not comprised of one solitary religious act, but a number of sacred events performed sequentially in a distinctive and recognizable way. Moreover, that the meanings and implications of ritual form a pattern of behavior, which then become familiar and ultimately ingrained in the social fabric of a community.

Roy Rappaport (1971) defines rituals very basically as modes of transmitting information within a society in a universal way. He has asserted that the use and repetition of ritual practices serve to legitimize religion. For example, “sacred propositions,” as Rappaport defines them, are statements, made verbally or otherwise, that have sacred value and social power. He cites several examples of sacred propositions, including the commonly uttered, “Jesus is the son of God” in Christianity, and the statement “We will lend you support in warfare,” made through participation in a ritual dance among the Maring of New Guinea (1971: 26, 29). These utterances or gestures, which ultimately serve as vehicles of communication, come to obtain power through their repetitive use in sacred contexts.

The majority of literature on rituals is centered on understanding what these behaviors actually do within society. Many scholars agree that rituals act as a kind of social leveler. Rappaport (1971) suggests that making “sacred propositions” will effectively regulate society. Turner (1969) asserts that ritual practice actually creates a kind of “anti-structure,” or a liminal arena in which social norms and distinctions are not experienced. This liminality literally strips away social boundaries and effectively unites the participants, the observers, and the community in general. It is through processes such as these, Turner (1969) suggests that ritual behavior can be transformative, not just at the individual level, but for the community as a whole. He describes this phenomenon as *communitas*, which is maintained by the social bond that is created via collective participation in ceremonial acts. As such, these events must occur on a regular basis such that social roles are maintained over time. The relationship between ritual and maintenance of social order is one that is found almost universally in the mid-20th century discourse on the subject (Bloch 1974; Geertz 1957; 1973; Rappaport 1971; Turner 1969, 1977; Wallace 1966).

In contrast, more recent scholarship has sparked some debate about the role of ritual within society (see Fogelin 2007). The application of practice theory to these studies (e.g. - Brown 2002; 2004) entails an examination of how rituals can act to reinforce unequal power relations, rather than “level” them. The central idea here is that ritual occurs at the individual level and that each participant negotiates and renegotiates the event from his/her own perspective (Bell 1989; 1992, 1997). In this way, the whole notion of whether or not archaeologists should attempt to get at the

“meaning” of a particular rite is a moot point because the event is experiential and personal. Furthermore, practice theorists assert that ritual can serve as a means for domination or resistance depending on the parties that are officiating the ceremony. While the issue of power relations and agency are particularly compelling aspects of practice theory, they imply that we, as archaeologists, can obtain sufficient data to address the “who” in ritual practices. Unfortunately, in the case of the San Bartolo data and many data sets that lack textual or other class-indicative lines of evidence, there is no way at present to get at the identities of those who directed or participated in the rites.

The investigation of ritual behavior can be especially challenging for archaeologists, who cannot bear witness to ancient ritual and must instead interpret the often-disturbed material residue of ceremonial practices. According to Fox (1996:484), “the study of ritual in an archaeological setting requires both a model of how ritual is effective in social motivation and an understanding of the processes through which ritual practices are encoded in material culture.” It is precisely this material code, or the manner in which ritual manifests itself in a tangible way, that continues to often befuddle the scholar of ancient ceremonial practices. The major goal of archaeology, however, is to identify and explain patterned behavior in the past. While archaeologists will not be able to get at all ceremonial behavior from the material remains, many rituals do in fact yield a repeated and predictable pattern of residue.

Catherine Bell's (1992) notion of "ritualization" is useful in addressing how this patterning actually occurs in the archaeological record. She defines ritualization as the way that culturally specific actions become clearly separate from one another, thus resulting in a "qualitative distinction between the 'sacred' and the 'profane'" (Bell 1992: 74). These discrete actions will often become manifested in distinguishable material signatures. One set of behaviors that contributes significantly to the recognition of ritualized contexts are acts of "sacrifice." The making of a sacrifice involves the giving up of something valuable for the sake of the ceremony itself. Firth (1963: 13) stresses that the significance or "value" of a sacrifice is defined by resource availability. In his work with the Lacandon Maya of Guatemala, Tozzer (1978: 116-117) described how offerings were made: "The article is brought in and 'placed' before the idols, or, as it is expressed in the chants, 'restored' to them...The gift is then offered to the braseros and their idols as a sacrifice, and the gods are asked to come in person and partake of the offering."

The worship of objects and places via the sacrifice of offering materials is a practice that is found in religions around the world. Mountains, rivers, caves, stone monuments, and buildings are among the places and objects that can be seen as sacred according to a community's worldview. The ceremonial treatment of these religious elements is often based on the notion that these objects and places are in fact imbued with a "life force," and are conduits for communication with deities or ancestors (e.g. - McGee 1998; Stross 1998). As such, these elements require the offering of objects and prayers. For example, the Lacandon view the making of

offerings as an obligation to the gods. To deny the gods this would be seen as an act of negligence (McGee 1990). This perspective on offerings fits into the model put forth by Mauss (1967), who proposed that offerings were in fact “gifts” in a complex system of reciprocal exchange. He described the relationship between gods and humans as a contractual one, suggesting that the action does not only involve the offering of objects by the worshippers, but also the *receiving* of these gifts by deities, spirits, ancestors, and the like. These gifts, then, can take the form of food, drink, statuary, vessels, plants, or other meaningful objects. The act of making offerings is done with the intention of appeasing or impressing the gods or ancestors, such that they will protect, assist, or admire the offerers. The provision of goods and prayers to the gods can be performed out of a need to maintain the status quo, return to the norm, or create change. However, while these gifts can take on many forms and are offered for varying reasons, according to Mauss’ model, their over-arching function is to maintain the tumultuous relationship between humans and the supernatural forces that control their lives.

Victor Turner has written extensively on the concept of offerings as acts of sacrifice. He (1977:190) defines this act in the following way: “Most types of sacrifice involve an offering of some kind from a visible human agent to an invisible entity usually thought of as more powerful than the offerer and capable of helping or hindering him by preternatural means.” He defines “sacrifice” and “immolation” as acts that entail the offering of something of value to the supernatural powers that be: “While animals may be killed, liquids may be poured out, and solids, including grain

and flour, burnt” (1977:190). The offering up of sacrifices occurs in myriad ways and may be fueled by varying motivations, requests and needs. Turner (1977:214)

provides the following elaboration:

It (the sacrifice ceremony) may involve the offering of a gift or the immolation of a victim – which may be partially or totally destroyed, consumed totally or as a special portion by officiants, or eaten by all present, often after special preparation. Prayers as well as objects are offered. Most sacrifices, lustrational, or other kinds of rituals, are performed as isolable ritual sequences, are intended to transform the moral state of those who offer them, through the intermediacy of a victim...

The sacrifice of objects, or the ritualized offering of them, has been a major topic of research in anthropological investigations over the last 50 years, resulting in an enormous body of information on this aspect of ceremonial behavior (e.g. – Firth 1963; Osborne 2004). As this work illustrates, while the ritual offering of objects takes on multiple forms in both past and present religious practice, one over-arching function of these acts is to create a bridge of communication between humans and the gods. On an etic level, this behavior acts to create and maintain unequal power relations, and can effectively quell fear, conjure hope, create unity, and absolve tensions. In an archaeological sense, offerings are literally snapshots into the past that provide vivid and unique expressions of not only religious beliefs, but shifts in political or social power and often cities on the brink of crisis. They are poignant manifestations of the dynamic relationship between the community and the supernatural forces that are seen to control their lives. Given the ecological fragility of the Petén and the patterns of occupation and abandonment evident at many sites across the region, including San Bartolo, it comes as no surprise that excavations

have revealed how ritual behavior was essential to the maintenance of political, social and ideological order among the ancient lowland Maya.

Ethnographic Analogy

A number of ethnographic and ethnoarchaeological studies are employed in subsequent chapters to create analogies to the past. They greatly enrich the data set and provide a window with which to view ritual action as a complex religious performance, rather than simply as the result of natural and cultural formation processes. As such, the information from these investigations of modern ritual practices creates an avenue for new perspectives and alternative interpretations of ancient ceremonial deposits.

The application of the ethnographic record to understand the past has a long and somewhat checkered history in Americanist archaeology. While this method was employed and perhaps abused by many scholars in the early part of the 20th century (e.g. – Dixon 1913; Strong 1935; Wedel 1938) and subsequently critiqued by some (e.g. – Slotkin 1952; Willey 1953), many scholars have more recently asserted that analogy can play a beneficial role in archaeological interpretation (Ascher 1961; Binford 1973; Mock 1998b; Stahl 2008). Disputes arise in terms of exactly how we, as archaeologists, can and should utilize information from the present in constructing our inferences about the past. Robert Ascher (1962: 1), an early proponent of the use of analogical reasoning in the processual realm of archaeology, states that “from the vista of the urban mid-twentieth century...it would be difficult to imagine what

existence was like in communities with but a single occupational specialty if it were not for ethnographies on food-gathering populations.”

Most scholars recommend proceeding with caution when using analogical arguments to link the past to the present. Clive Gamble (2001) warns that variability observed in living communities is only a small percentage of the variation that existed in the past. He suggests that ethnography can only offer archaeologists a “way of thinking,” but can never directly answer specific questions about the past (2001: 86). Binford (2001) asserts that the present provides “frames of reference” from which to approach patterns of behavior and environment in the past. According to Alison Wylie (1985: 64), while analogy can be instrumental to archaeological interpretations given that it is used correctly, “... a candid appreciation of its limitation is appropriate where analogical inference is concerned.” She suggests that ethnographic analogy is appropriate for use in archaeological interpretation as long as consideration is given to the “fit” of the ethnographic to the archaeological data. Wylie (1985) recommends that the differences in addition to the similarities between the past and the present be addressed. Richard Gould supports this notion in his assertion that it is only through the “anomalies of human behavior,” those observed differences between past and present culture, that we can strive to “...posit the widest possible range of alternative behaviors to account for the material residues we deal with...” (Gould and Watson 1982: 376). Gould warns that ethnographic analogies have a tendency to be used in an unscientific manner and “...are sometimes hard to distinguish from wishful

thinking,” thus it is through the variation, rather than the continuity, that we will be able to develop the best analogical models (Gould and Watson 1982: 375).

Despite the limitations and analytical problems inherent in the use of analogy, there has been much discourse promoting its application to archaeological inquiries. Wylie (1985:107) asserts that only through the incorporation of ethnographic analogy into archaeological interpretive approaches, can archaeologists attain certain “...otherwise inaccessible aspects of the past.” Patty Jo Watson, also a proponent of the use of analogy in archaeological investigations, argues that by applying the concept of “general uniformity,” or uniformitarian principals, we can “build interpretive bridges” that connect the past to the present (Gould and Watson 1982: 362). According to Watson, analogy can be applied in archaeological investigations as long as it is subject to rigorous hypothesis testing. Ascher (1962: 1) asserts the utility of this approach in terms of “actions:” “Thus, by moving from the results of actions to actions which are known to yield similar results, it becomes possible to make statements about behavior in the absence of direct observation.”

Ethnographic analogy is particularly applicable to the investigation of ancient ceremonies when its use is limited to the drawing of parallels between general patterns of behavior in the present and the past. This approach has provided a broader perspective with which to address and understand the processes that resulted in the deposition of ritual materials. Ceremonies are specific actions that leave distinct material signatures, thus allowing for the separation of ritual and secular remains, and

approach applied by Brown (2002) in her ethnoarchaeological study of highland Maya shrines.

While ethnographic analogy has not been widely applied in Maya studies, it has played an integral role in broadening our knowledge base of ancient Maya ritual behavior. A number of Maya scholars have addressed the continuity between the ancient and living Maya in regard to religious beliefs and practices (Farriss 1984; Freidel *et al.* 1993; Mock 1998b; Tedlock 1982). Indeed, circumstances have changed dramatically for the Maya over the past two millennia, particularly after Spanish contact, due to a long and complex process of adaptation to colonization, racial oppression, and globalization. However, there is a degree of uniformity between the evidence for ritual behavior that exists in the ethnographic and archaeological record of this region. As discussed above, the performance of Maya ceremonies, both in the past and present, requires the making of offerings, which act as tangible markers of this behavior. Analogical arguments present in the following discussion of Maya ritual behavior center on the most tenacious aspect of this type of action, the material residue of religious practices.

It should be noted that throughout subsequent chapters, I will sometimes refer to specific behaviors or beliefs among the living Maya in the present tense. This is in no way to suggest that the group under discussion has not changed or adapted since the ethnographic work was done, which in some cases was more than 70 years ago, as with Redfield and Rojas' 1934 study in Chan Kom. Rather, the present tense is only

used to eliminate any confusion about whether the ancient or living Maya are being discussed.

Chapter III

Excavations

In the four field seasons between 2002 and 2005, I conducted a broad suite of excavations across San Bartolo with the goal of addressing patterns of ritual behavior, both at the site-wide level and in individual contexts. The following review is dominated by my own investigations at the site, but also includes the work of some of my colleagues who conducted excavations that became highly relevant to addressing the issue of ceremonial practice at San Bartolo. Excavations along the front façades of the pyramids Las Pinturas and Las Ventanas, as well as at Structure 63 and the southwest corner of the Palace Tigrillo (**Fig. 3.1**), have all contributed significantly to this work, and will be reviewed in detail below. Investigations that I conducted within the Las Pinturas pyramid, in San Bartolo's Main Plaza, in Room 1 of Las Ventanas, and Structure 157A did not yield clear evidence of ceremonial behavior, but nonetheless contribute to an understanding of the work that has been done to address this topic. This chapter will provide a description of the finds from each of these contexts as well as some discussion of the interpretations and implications that are relevant to addressing religious practice at San Bartolo.

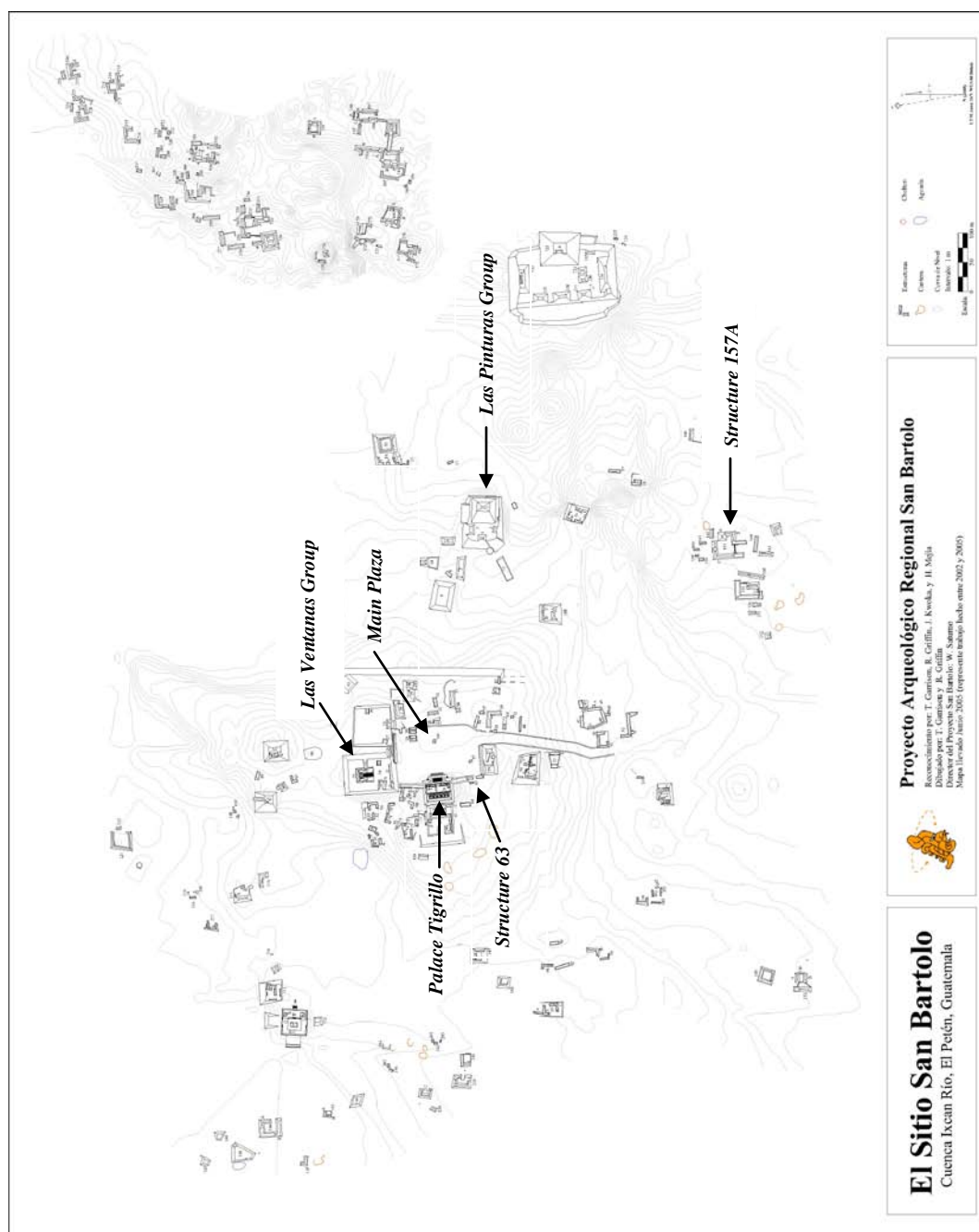


Fig. 3.1: Map of San Bartolo with Major Excavations Discussed in Chapter
(Map drawn by T. Garrison and R. Griffin in 2005)

As I discussed in Chapter 1, my interest in this research was piqued in 2002, when I excavated Structure 63, a small shrine filled with ceramic offerings and ash

that surrounded a pot-bellied monument. This concept of making offerings, certainly ceramic ones, was common practice among the ancient Maya and it was no surprise to find evidence for it at San Bartolo. However, it occurred to me that this was a good avenue for looking at ritual behavior more broadly at the site. In this vain, I subsequently conducted a series of both small and large scale excavations across San Bartolo during 2004 and 2005, looking for evidence of ritually offered ceramics and other materials in Late Preclassic and Late Classic contexts. Many excavations yielded no obvious evidence of ritual behavior, while some contexts abounded with evidence for offering activity and other indicators of ancient ceremonial practice. Ultimately, this work yielded very little data about Late Preclassic ritual behavior, something I attribute more to the proverbial needle in a haystack problem than to an actual dearth of such data at San Bartolo. However, the Late Classic contexts provided a much richer data set and one that illustrates clear patterns of veneration and termination at the site.

Structure 63

Excavations at Structure 63 were conducted during the 2002 and 2003 field seasons at San Bartolo. A thorough discussion of the excavations and their larger implications is available elsewhere (Craig 2004b). However, this work will be summarized here, as the finds recovered from Structure 63 are integral to looking at patterns of ritual behavior across the site.

Excavations at Structure 63 yielded evidence for a large and complex ceremony that involved the smashing of hundreds of vessels, burning events, and the deposition of human remains around an anthropomorphic carved stone monument in the site's ceremonial core (**Fig. 3.1**). It is during the Classic and Terminal Classic periods that the inhabitants of San Bartolo were using Structure 63, a small Late Classic building constructed around a Late Preclassic pot-bellied figure, or *barrigon* (**Fig. 3.2**). The stratigraphic information and material remains from Structure 63 suggest that a number of independent ceremonial events with varying objectives took place at this locale, but that the great majority of activity centered on the building's use as a shrine during the Late Classic occupation at San Bartolo. This shrine was apparently a place visited with some degree of regularity throughout the Late Classic Period.



Fig. 3.2: Monument 1 from Structure 63

Excavations at Structure 63

During the 2002 and 2003 excavations at San Bartolo, I excavated a small shrine, Structure 63, and the massive ceramic offering that was contained within the building (Craig 2004). The structure is small T-shaped building located off the Main Plaza. The building measures approximately 5 meters along the back side and 2 meters along the front.

A large potbellied monument (Monument 1) was set into the floor of the structure and was surrounded along the east and south sides by a deposit of over 9000 sherds. There was abundant evidence of burning directly east of the boulder and a secondary deposit of human and animal remains on its south side. Excavations of varying sizes and depths were conducted on the north, south, east and west sides of the monument (**Fig. 3.3**).

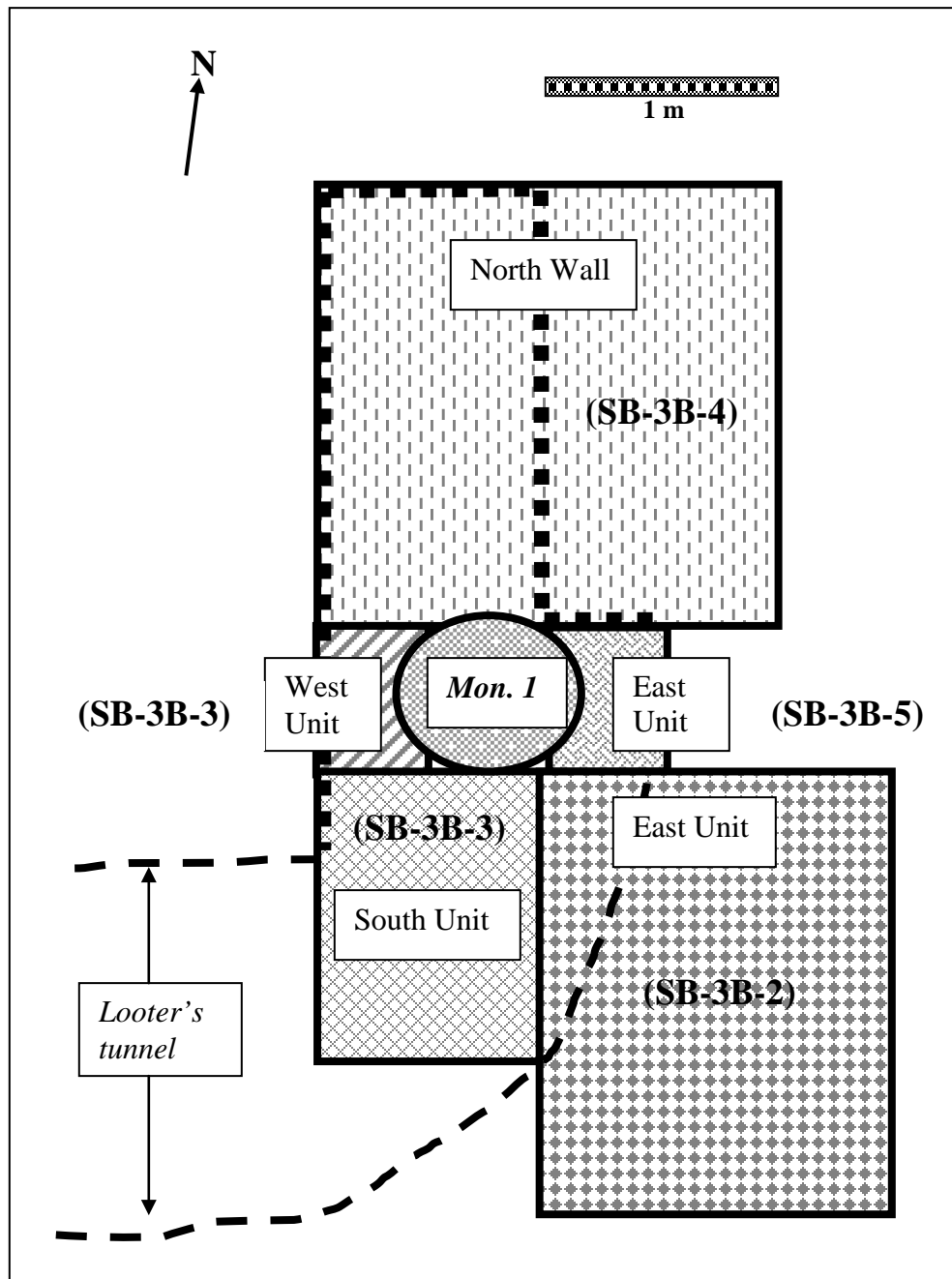


Fig. 3.3: Plan View of Excavations Units at Structure 63.

Note structure wall denoted by dotted squares.

Excavations on the east side of the monument yielded by far the densest concentration of material remains. A one-meter thick layer of mostly Late Classic

sherds was present on top of the floor of the structure. There was no evidence of any kind of stratigraphic separation within the deposit. No complete vessels were recovered from this area of the structure. The deposit was dominated by utilitarian wares, but some elite wares were present as well. Evidence for massive burning was concentrated in the area in direct contact with the monument. I found unarticulated human and animal remains 1m southeast of the monument. The human and animal bones were clearly intermixed with sherds and small bits of unidentified burned bone, suggesting they were part of the offering. Ashley Sharpe (2009) conducted formal analyses on the osteoarchaeological material from Structure 63. She determined that at least two adult humans were present in the deposit. While Sharpe could not sex these two individuals, fragmentary pelvic remains from elsewhere in the excavation indicate that one male was present (whether this male is one of the two that were recovered with the main deposit cannot be determined). She noted that much of the human osteological material from one individual was burned, particularly at the mid-section of the body (Sharpe 2009: 54). Sharpe did not find evidence for cut marks or other evidence of trauma on the human remains. The faunal remains recovered from Structure 63 included rodent, young white tailed deer, and turtle remains. The turtle carapace fragment is a particularly interesting offering because there is a turtle carved on the back of the pot-bellied monument (see below).

I conducted excavations on the west side of the monument down to the floor of the building. Investigations in this area of the structure did not yield a dense deposit of sherds, but rather similar evidence for burning, along with one whole Late

Preclassic vessel (Polvero Negro) and small quantity of Late Classic sherds. The vessel was positioned directly behind the monument.

Modern looting activity severely disturbed the area above the floor on the south side of the monument, preventing any kind of systematic excavation at this level. However, a dense deposit of sherds was found just below the structure floor (Fig. 3.4). This layer of ceramics, while considerably smaller in size than the deposit recovered from above Floor 1 to the east of the monument, resembled the assemblage from inside the structure in general types represented and in the density of the sherds. This assemblage was also dominated by Late Classic types.

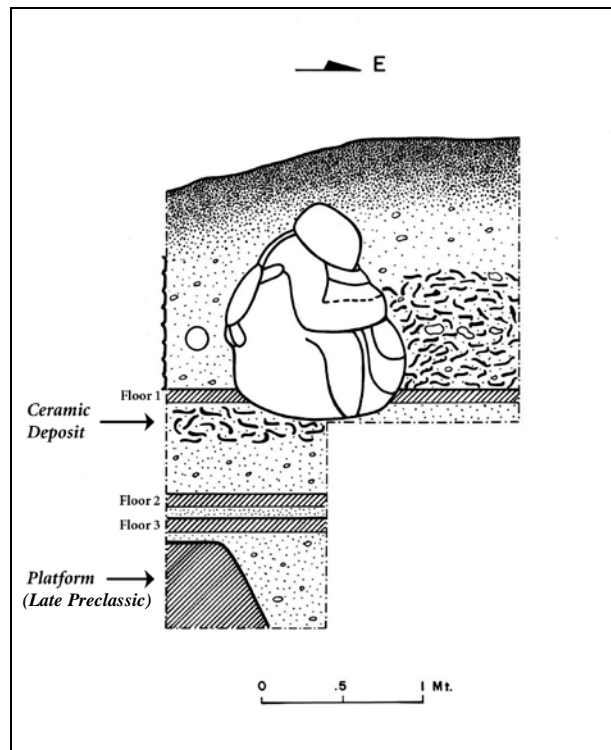


Fig. 3.4: Structure 63, Profile of South Unit in Relation to Late Classic Structure Floor

Investigations down to the floor of Structure 63 on the north side of the monument exposed only building collapse. However, I uncovered two whole cached

vessels directly below the floor of the structure in this area. The vessels were both over-turned and surrounded by white marl (**Fig. 3.5**). They were clearly placed there as a dedicatory cache before the construction of Structure 63. Excavations below the two cached vessels on the north side and the under ceramic deposit on the south side of the monument exposed Late Preclassic plaza floors and architecture, but did not yield any further evidence for ritual behavior.

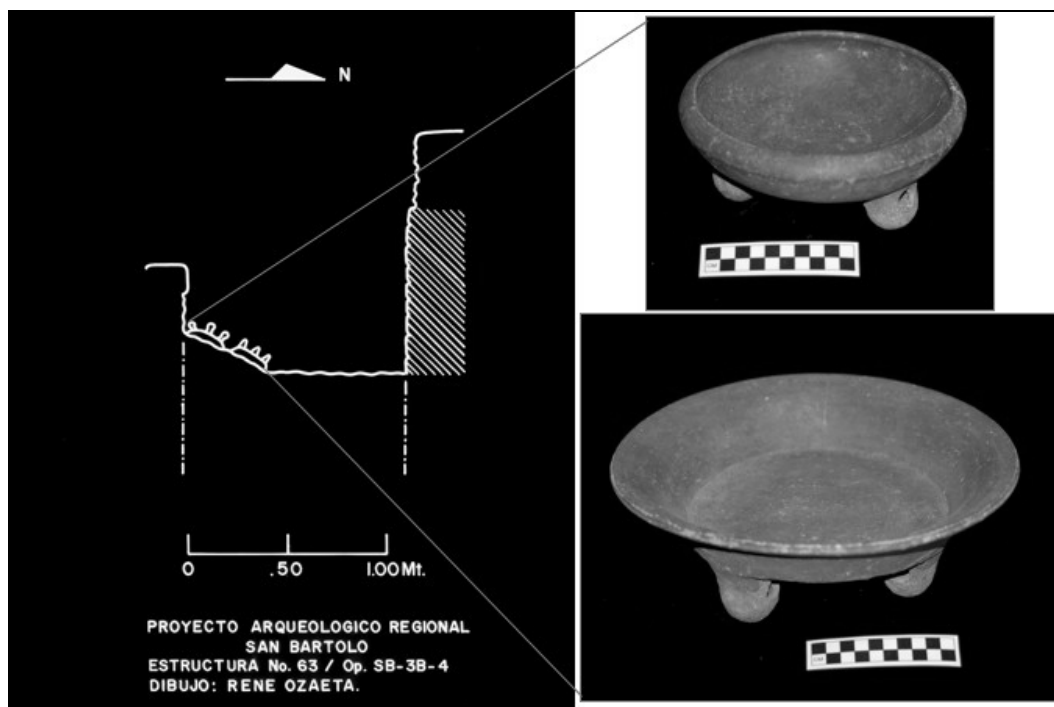


Fig. 3.5: Cached Vessels at Structure 63

The activity at Structure 63 has been dated stylistically from the ceramics. The ceramic types represented both below and above the floor of Structure 63 are overwhelmingly Late to Terminal Classic, establishing that both the construction and use of the shrine date to this period (also see Chapter IV).

Two AMS radiocarbon dates run from Structure 63 support the dates suggested by ceramic analysis. One charcoal sample that I collected from below the

structure floor in the South Unit yielded a date of cal A.D. 795±105 (Beta - 187442). This date corresponds to the construction of Structure 63 and the setting of Monument 1. I recovered a second charcoal sample from in front of the head of the monument in the East Unit that yielded a date of cal A.D. 835±55 (Beta -187443). This date corresponds with the ritual activity that occurred during the use of Structure 63. These dates place Structure 63 firmly within the end of the Late Classic and beginning of the Terminal Classic period.

Monument 1

It is clear from the excavations at Structure 63 that the potbelly is the focal point of the ceremonies represented at the structure. This is illustrated both by the stratigraphy of the features themselves and by the distribution of offerings. Furthermore, it is the ancestral quality of the monument that may provide the most compelling information about the actual purpose of the ceremonies. This idea will be explored further in Chapter VI.

Monument 1 rests within the floor of Structure 63. A 64 cm thick layer of rubble and earth fill separates this floor (Floor 1) from the preceding floor (Floor 2) (**Fig. 3.4**). The bottom 20 cm of the boulder is situated within this layer under the structure floor, which indicates stratigraphically that Monument 1 was put into place before the floor was laid down. There is no evidence that the floor was cut and the floor lips up to meet the boulder in several areas. The deposition of offerings also indicate that Monument 1 was the focal point of the feature. The sherds fanned out

along the east and southeast sides of the monument, likely where the entrance or entrances of the building would have been. The evidence for burning increased significantly based on proximity to the monument. The east side of the sculpture clearly showed some burned areas and a large spalled fragment of the monument was found in this area of the ceramic deposit. Evidence from the excavations leave no doubt that the purpose of Structure 63 was to house Monument 1 and serve as a receptacle for offerings.

I exposed approximately 75% of Monument 1 in 2003 with the help of conservators Rae Beaubien and Batyah Shtrum. The monument measures 90 x 50 x 120 cm and was carved from one piece of limestone. Diagnostic attributes of the sculpture are limited. The sculptural elements of the monument include a large head with no facial features evident, arms on each side of the figure, and large round body. The arms are bent at the elbow and appear to be clasping the large belly of the figure (**Fig. 3.2**). There is the body of a turtle carved on the west side, or back, of the sculpture. The neck of the turtle figure stretches up to meet the neck of Monument 1.

Monument 1 is clearly a rare example of a lowland pot-belly, or *barrigon*. Despite the fact that this sculptural style is generally restricted to the southern Maya area, the shape, size, and position of the figure bear a striking similarity to the *barrigones* from Santa Leticia in southeastern El Salvador (Demarest 1986; Demarest *et al.* 1982). While this sculptural style remains rather elusive, it has been generally dated to the Late Preclassic based on work by a handful of scholars (Demarest 1986; Parsons 1986). Demarest is one of the few Maya scholars who has been able to

excavate these unique sculptures in an undisturbed Late Preclassic context. At Santa Leticia he excavated a small residential area that contained a row of three *barrigones* resting atop an artificial terrace. Both the potsherds and carbon dates recovered from areas in association with these monuments along with the dating of the site in general establish that the monuments were set during the Late Preclassic (Demarest 1986).

2004 and 2005 Excavations across San Bartolo

Given the wealth of information on ritual behavior at San Bartolo that the Structure 63 excavations yielded, in 2004 and 2005 I set out to broaden the scope of data with successive investigations into ceremonialism across the site. At the close of 2004, after spending the majority of the season assisting Bill Saturno with the excavation of the West Wall in Las Pinturas Sub-1A, I devoted several weeks to looking for Late Preclassic caching behavior across the site. In Las Pinturas Sub-1A, I dug the following units down to bedrock: 1) one 60x60 cm unit into the platform on the exterior of the door near the southwest corner of the room; 2) one 60x60 cm unit in front of the talud on the exterior of the building; 3) one 60x60 cm unit into a burned area of floor near the southwest interior corner of the room; 4) one 2 m x 70 cm unit into a burned area of the floor near the northwest corner of the room; and 5) one 2 m x 60 cm unit in the center of the room. At the Palace Tigrillo I placed 80 x 80 units at the northeast corner, the southeast corner, the base of the central staircase, midway up the steps along the centerline, and in front of a doorway at the top of the staircase. In the Main Plaza, I placed 1 m x 80 cm units in front of Stela 1, Stela 2,

and Stela 3. None of these investigations yielded evidence for caches, which suggested that a more expansive search for ceremonial activity was necessary.

In 2005, I conducted a series of excavations aimed at looking for broad patterns of ritual behavior at San Bartolo. These investigations were conducted in the Las Pinturas Group and at the pyramid Las Ventanas. The goals of the excavation program were: 1) to gather information on the presence or absence of evidence for ritual behavior in civic-ceremonial contexts; and 2) to investigate areas of the structures that were generally considered powerful, sacred locales, like corners, centerlines, and doorways for evidence of ceremonial activity, such as ceramic offerings and ash.

Excavations at Las Pinturas

The primary goal of the excavations at Las Pinturas (Structure 1) was to expose the centerline and the two plaza-facing corners (the northwest and southwest corners) of the structure (**Fig. 3.6**), documenting any evidence of ritual behavior on the surface of or within the architecture.

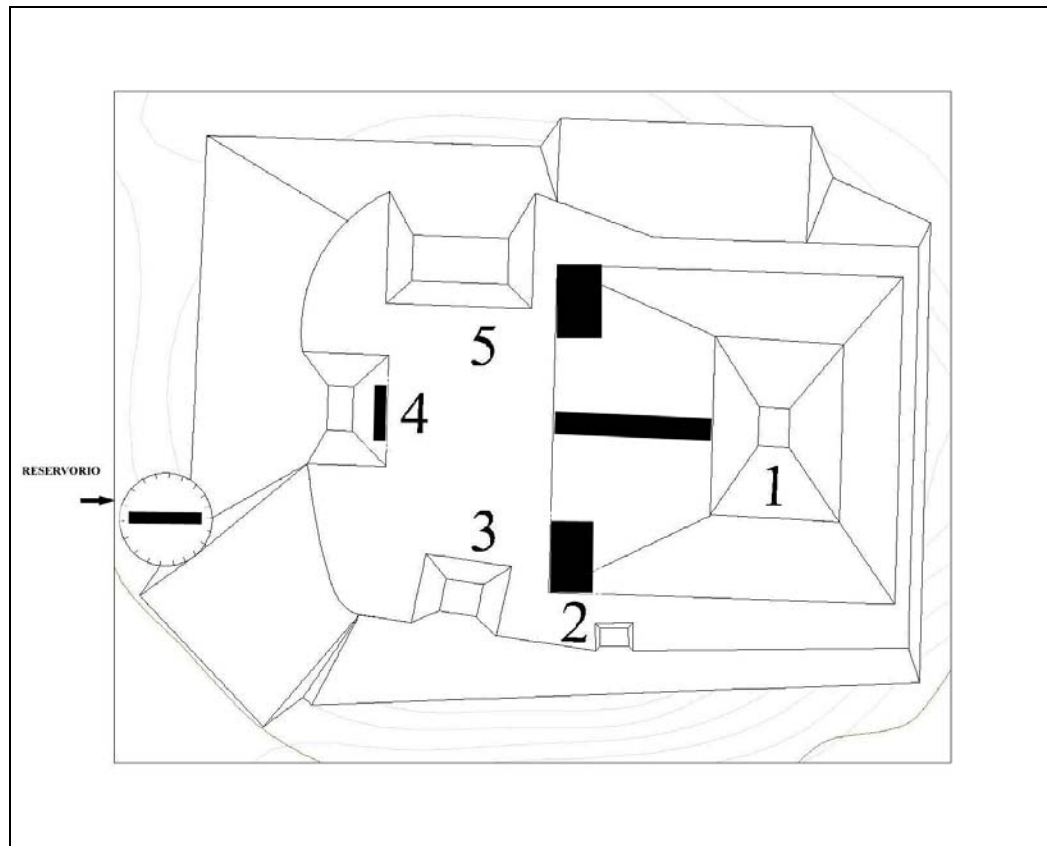


Fig. 3.6: The Las Pinturas Group
(Excavations relevant to discussion shown in black)

Before the investigations in 2005, the only excavation that had been conducted on the front, west-facing side of Las Pinturas was carried out under the direction of Diane Davies (2003), who placed a 3.7 meter long trench (SB-1C-6) that ran from the estimated base of the pyramid into the structure. This tunnel enabled me to estimate where to expect to find architecture on the two corners, which were both buried under significant building collapse. I ran a level, north-south line across the base of the pyramid, using the final phase architecture from the 2003 tunnel as a reference. In order to begin excavations, which were conducted simultaneously on both corners, a 2 x 1 meter trench was laid out with the line running across the center of each unit.

On each corner, once the pyramid face was identified, the architecture was exposed until it wrapped around to form the corner. All soil, with the exception of the collected ash samples, was screened using a ¼ inch screen.

Northwest Façade Corner Excavations:

I began excavations with an E-W 2 x 1 meter trench (SB-1C-7) (**Fig. 3.7**). The first level consisted of a 25 cm thick humus layer. At 88 cm below the surface, I encountered some badly destroyed architecture on the east half of the unit. I continued excavations on the west half of the trench down to the plaza floor, which I found 2m below the surface. While the structure was very deteriorated in SB-1C-7, a clear profile of the architecture could be seen on the north wall of the trench. I continued excavations in this direction. These excavations below the humus layer yielded 115 sherds (a mix of Late Preclassic and Late Classic types), one chert knife, 14 chert flakes, and 2 obsidian blades.

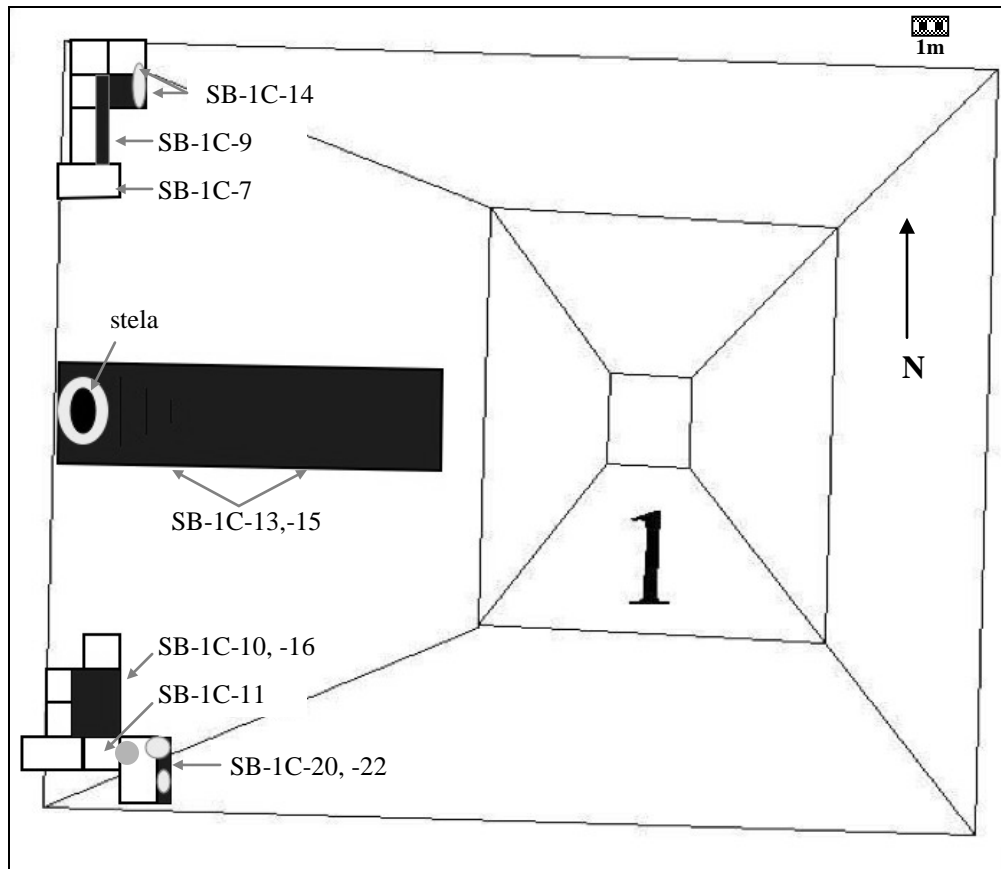


Fig. 3.7: Major Excavations Conducted on the Las Pinturas Façade.
Dark areas indicate presence of architecture. Ovals/circles indicate presence of ash layer. Not all excavations mentioned in text are labeled on map.

Following the architecture uncovered in SB-1C-7, I then excavated a N-S 4 x 1m trench in one meter sections from south to north (SB-1C-9) (**Fig. 3.7**). The trench encompassed both the far west side of the building and the plaza floor below. I found the floor at 2m below the surface. This floor was badly eroded in the majority of the trench, but one polished area was identified.

These excavations exposed what appear to be two separate *taluds* on the pyramid façade. As I continued excavations down the trench in 1 m sections, the architecture angled upwards as a result of varying preservation. The building was

more well-preserved as excavations moved north down the trench (**Fig. 3.8**). The stones were relatively uniform in size, averaging 30-40 cm in length and 20-30 cm in width. The architecture ended in the third meter section of SB-1C-9. I continued excavating the trench for one meter more to follow the plaza floor in the hope of finding it intact. Unfortunately, the floor was also badly eroded in this section of the trench. These excavations yielded an abundance of modeled stucco fragments, particularly in the northern end of the trench. Excavations below the humus layer recovered 326 sherds (a mix of Late Preclassic and Late Classic types), one chert knife fragment, 10 chert flakes, and one sample of modeled stucco.



Fig. 3.8: SB-1C-9, NW Corner

I then placed a N-S 2 x 1 (SB-1C-14) meter trench that extended from the northern 2 meters of SB-1C-9 (**Fig. 3.7**). These excavations exposed a badly destroyed inset corner (**Fig. 3.9**). Many of the stones are clearly cut, but seem to have shifted. Another possibility is that they are not actually the facing stones, but are the interior fill of the corner.



Fig. 3.9: SB-1C-14 – Inset Corner

Just above the architecture, I uncovered an angled layer of dark ash. The ash is very fine and grey in color (10 YR 4/1) (**Fig. 3.10**). I collected a sample of the ash for paleoethnobotanical analyses. Late Classic sherds, namely of polychromes and Tinaja serving vessels, were found in the ash itself as well as in the unit as a whole. These excavations below the humus layer yielded 242 sherds (a mix of Late Preclassic and Late Classic types), 11 chert flakes, and one sample of ash.



Fig. 3.10: SB-1C-14, Ash Layer in Profile, NW Corner

The SB-1C-17 excavations entailed the removal of a 1 x 1 meter portion of SB-1C-9. My goal was to investigate below the intact architecture. I identified an earlier phase of construction in this unit that is comprised of considerably larger stones (relative to the architecture found in SB-1C-9). Although they were not exposed in their entirety, each measured at least a meter in length. There was also

evidence for cellular construction in this unit, consisting of three walls running along all but the east side of the unit, and loose fill in the center. In these excavations I recovered 31 sherds, 1 obsidian blade, one fragment of painted floor stucco, and 2 carbon samples. The sherds present were too eroded and small to all be typed, but some Late Preclassic sherds were present in the assemblage.

In the SB-1C-19 excavations (1 x 1 m unit), I removed the inset corner in SB-1C-14. While the stones had clearly shifted and slumped forward, I found what I have interpreted as an *in situ* cache of painted stucco within the arrangement of stones (Feature 19). The stucco fragments are clearly from an interior wall and are very likely from an mural other than those in Pinturas Room 1 (Sub-1A) (Heather Hurst, personal communication 2005). Given that Maya caches are by their very nature hidden, the presence of the stucco fragments supports the interpretation that the grouping of stones in SB-1C-14 was not part of the actual façade, but was rather the fill of the corner. Below the SB-1C-14 stones I encountered an earlier phase of construction also characterized by very large cut stones. These excavations recovered 26 sherds and 30 fragments of interior painted wall stucco. Again, the sherds present were too eroded and small to all be typed, but some Late Preclassic sherds were present in the assemblage.

Excavations on the northwest corner of the Las Pinturas façade provided some important information on both the building itself and the ritual behavior associated with it. These excavations revealed two kinds of construction, based on the distinct differences in stone sizes between the upper and lower levels. Stratigraphically, this

likely represents the interior fill of the final phase directly on top of the exterior façade stones of the penultimate phase. This hypothesis could be tested by conducting tunneling excavations near the structure corners, something that time did not allow for in 2005. The northwest corner excavations also yielded clear evidence of ritual behavior. Ash and Late Classic ceramics were found in association with the corner itself and a small cache of painted stucco was found within the fill of the corner.

Southwest Façade Corner Excavations:

I began excavations on the southwest façade corner with an E-W 2 x 1 meter trench (SB-1C-8) that was oriented so that the line running across the base of the pyramid ran through the center of the unit. As with SB-1C-7, the hope was that by using the architecture exposed in the 2003 tunnel, the trench would pick up both plaza floor and the base of the structure. After removing the humus layer (25 cm in thickness), I continued excavations down to a fairly poorly preserved floor. The floor was better preserved on the east side of the unit (closer to the architecture – see below). While I encountered an abundance of building collapse, no intact architecture was exposed in this unit. I did recover an abundance of modeled stucco fragments in similar quantities to SB-1C-14. These excavations below the humus layer yielded 291 sherds (a mix of Late Preclassic and Late Classic types), 5 chert flakes, 2 obsidian blades, and a sample of modeled stucco.

I then placed a N-S 2 x 1 (SB-1C-10) meter trench that extended northward away from SB-1C-8 (**Fig. 3.7**). Subsequently, I dug a N-S 3 x 1 meter trench (SB-1C-16 – see below) placed just to the east of SB-1C-10 (**Fig. 3.7**). Both of these excavations exposed a low platform in very bad condition 1.15 meters below the surface. The interpretation of this feature as intact facade architecture is based on the presence of three large cut stones in a clear linear arrangement on the north side of SB-1C-10 (**Fig. 3.11**). The plaza floor is fairly well-preserved on the north side of the unit as well, while on the south side of the unit the floor was badly destroyed and there was no evidence for facade architecture. Excavations below the humus layer recovered 221 sherds (a mix of Late Preclassic and Late Classic types), one figurine fragment, and one sample of modeled stucco.



Fig. 3.11: SB-1C-10, SW Corner
Note Linear Arrangement of Stones

I extended SB-1C-8 by placing a 1 x 1 meter unit along its east side (SB-1C-11) (**Fig. 3.7**). University of New Hampshire study abroad student Caitlin Walker conducted these excavations under my direction. At one meter below the surface, we found a layer of ash very similar to the one in SB-1C-14. The layer was 15 cm in

thickness, was the same color as on the northwest corner (10YR 4/1), and was very clear in profile (**Fig. 3.12**). However, we encountered no clear intact architecture in SB-1C-11. One possibility is that ash slumped forward from surrounding architecture exposed in SB-1C-10, -16, and -20 (see below). It is also possible that some architecture is so deteriorated that it was unrecognizable during excavation. We assigned the area 30cm above to the plaza floor a distinct level number in order to separate those sherds that were in association with the floor from those that may have fallen from above with building collapse. The floor found in SB-1C-8 continues in this unit and is generally better preserved. These excavations recovered 142 sherds (a mix of Late Preclassic and Late Classic types), 2 samples of modeled stucco, and one sample of ash. The final level (SB-1C-11-3) contained 133 of the 142 sherds.



Fig. 3.12: SB-1C-11, Ash Layer in Profile, SW Corner

I extended SB-1C-10 by placing a 3 x 1 meter unit along its east side (SB-1C-16). The purpose of the excavation was to further expose the architecture, which consisted of a linear arrangement of stones found in SB-1C-10. A compact layer of variably sized stones and soil was exposed at the level of the line of stones. I have interpreted this feature as building fill. The facing stones were clearly not present as they were in SB-1C-10, although the layer is far too compact relative to the building collapse in the stratum above to be fall from above. During the SB-1C-16

excavations I recovered 235 sherds (a mix of Late Preclassic and Late Classic types), 10 chert flakes, 1 obsidian blade, one sample of modeled stucco, and one marine shell.

I placed a 1 x 1 meter unit (SB-1C-18) into the deteriorated architecture on the south side of SB-1C-16. As with SB-1C-17 and -19, I exposed very large stones in this excavation, distinguishing the penultimate phase from the final phase of the structure. Two large stones were found just below the compact fill in SB-1C-16, each measure approximately 1 m x 35 cm. Below these large stones I found evidence for cellular construction. Within the 1 m unit, there were two lines of stones, one running along the west and another along the south side. The rest of the unit consisted of loose fill. This is also very distinct from the kind of building fill I found in the unit above (SB-1C-16). The SB-1C-18 excavations recovered 12 sherds, none of which could be typed due to their state of preservation.

I extended SB-1C-11 by placing a 1.4 x 1 meter unit (SB-1C-20) along its north side. (**Fig. 3.7**). The goal of excavating SB-1C-20 was to continue to look for intact architecture on the southwest corner of the pyramid and to more carefully define the ash layer. In an effort to achieve the latter, I intentionally created more levels during this excavation. The first two strata were composed of humus and building collapse very similar to what I had been encountering in all the pyramid façade excavations. The third level consisted of smaller stones and the soil was a bit darker than in the levels above. At 1 meter below the surface I encountered the ash layer as well as intact pyramid façade architecture. The ash layer (10YR 4/1) was 17 cm in thickness and continued across the unit. The ash layer was found on top of the

architecture in the northeast corner of the unit. I continued excavations down to the floor from the ash layer, continuing to expose building façade on the east side of the unit. The floor, which runs right up to the structure, was very well- preserved in this unit. The architecture exposed consists of two clear rows of stones that form a talud just above the floor (**Fig. 3.13**). The SB-1C-20 excavations yielded 215 sherds (a mix of Late Preclassic and Late Classic types) and one sample of ash.



Fig. 3.13: SB-1C-20, Pinturas Façade and Plaza Floor, SW Corner

Under my direction, University of New Hampshire study abroad student Keith Ferguson conducted the SB-1C-22 excavations, which consisted of a 1 x 1 meter unit to the south of SB-1C-20 (**Fig. 3.7**). The goal of the SB-1C-22 excavation was to expose more of the building façade and determine the extent of the ash layer. We used the same levels that I had defined in the SB-1C-20 excavations. The ash layer was distinct in this unit from that which was found in SB-1C-11 and -20. It did not occur in a layer across portions or the entire unit. Rather, it was concentrated in one area in association with the architecture (**Fig. 3.14**). Furthermore, the ash contained several large pieces of carbon. We exposed intact façade architecture on the north side of the unit (continuing from the architecture found in SB-1C-20) but the building façade on the south side of the unit is partially destroyed. The SB-1C-22 excavations below the humus layer yielded 272 sherds (a mix of Late Preclassic and Late Classic types), 3 chert flakes, 4 samples of modeled stucco, two carbon samples, and one sample of ash.

The condition of the architecture on the southwest corner excavations varied considerably from unit to unit. In SB-1C-16, for example, it is evident that the facing stones were conspicuously absent, whereas in SB-1C-20 and -22 the building façade is intact and well preserved. It seems evident, then, that the pyramid corner was not destroyed from building collapse, but rather that it was dismantled in antiquity.



**Fig. 3.14: SB-1C-22, Ash Layer, SW Corner
Note concentration of carbon**

Excavations Along the Central Axis of Las Pinturas:

In 2005, while I was excavating at the corners of Las Pinturas, Monica Pellecer Alecio was investigating the building's central staircase. Her findings will be summarized here, with special attention to those aspects of her excavations that paralleled my own. A more complete description of her work is available elsewhere (Pellecer 2005).

Pellecer placed a 3 x 5.6 meter trench (SB-1C-13B) along the central axis of Las Pinturas, approximately half way up the structure face (**Fig. 3.7**). In these excavations, she exposed a staircase in very poor condition. Pellecer (2005) suggests

that the facing stones are completely absent and that what is left is the fill of the staircase.

Pellecer placed a 1.5 x 2 meter unit (SB-1C-15) at the base of Las Pinturas (**Fig. 3.7**). She continued down to the plaza floor and the bottom two steps of the building. In the northwest corner of the unit, Pellecer exposed the edge of Stela 5.

She extended SB-1C-15 by putting a 1 x 1 meter unit along its east side (SB-1C-15A). The excavations continued down to the poorly preserved staircase and exposed more of the stela.

In SB-1C-15B, a 3 x 1 m unit dug to the north of SB-1C-15A, Pellecer exposed Stela 5 in its entirety. The steps were in equally poor condition, as was the stela itself. Directly on top of the stela was a compact layer of variably-sized stones, something Pellecer (2005) has interpreted as intentionally placed by the Maya, possibly for protection. Below this layer of stones was thin layer of ash. Stela 5 has been dated stylistically to the Late Preclassic (Stuart, personal communication 2005) (**Fig. 3.15**). Only the upper half of the monument was found at the base of the Las Pinturas steps and there was no evidence that it was originally set there. It is plausible, however, that it once sat in the Las Pinturas plaza.

Pellecer placed a sequence of two units, SB-1C-15C and SB-1C-15D (each measuring 1.5 x 2 meters) on the east side of SB-1C-15B. The architecture exposed was in very poor condition in these units and it was difficult to determine the presence or absence of the central staircase.

She placed a 1 x 2.8 meter unit (SB-1C-15E) directly to the south of SB-1C-15C. In this excavation she exposed a clear leveling of the steps. Pellecer (2005) reports that the final strata above this floor is a 24 cm thick layer of gray soil with ash (10YR 6/2). The layer was not pure ash, but rather contained abundant small stones.

She placed two sequential units on the east side of SB-1C-D: SB-1C-15F (1.5 x 2m) and SB-1C-15G (1.5 x 5.9m). In these units, she exposed the staircase up to SB-1C-13B. Pellecer did not encounter layers of ash or ashy soil in any of the excavations further up the structure face. The staircase as a whole was in very poor condition and it is plausible that, as Pellecer suggested, what remains is architectural fill (**Fig. 3.16**).

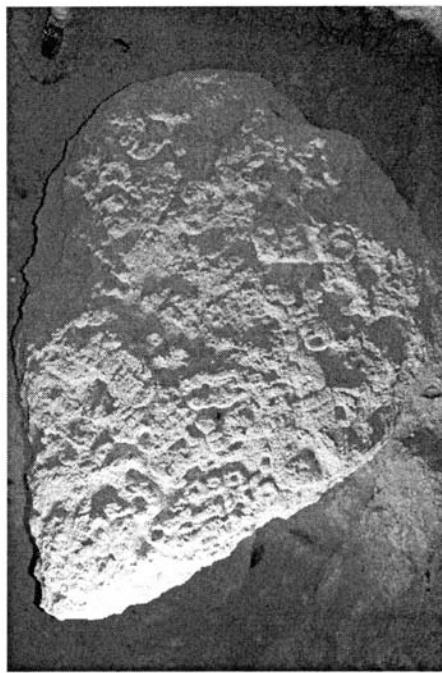


Fig. 3.15: Stela 5 (from Pellecer Alecio 2005, Fig. 4)



**Fig. 3.16: Las Pinturas Central Staircase and Stela
(from Pellecer Alecio 2005, Fig. 3)**

The Las Pinturas Excavations: Continuities and Disjunctions:

The excavations along the central staircase and at the façade corners of Las Pinturas suggest that the pyramid was intentionally dismantled in antiquity. Very few façade stones were exposed in either the northwest corner or central staircase excavations. Furthermore, investigations at the southwest corner revealed a clear distinction between the condition of the architecture across units, suggesting that non-human forces, like collapse from above and root damage, does not best explain the poor preservation of the Las Pinturas face.

It should be noted that an abundance of modeled and painted exterior stucco fragments were recovered in all units on both corners. However, Pellecer recovered very little modeled stucco from the excavations at the base of the structure and

considerably more from the excavations further up the structure. We know that large masks adorned the penultimate phase of Las Pinturas (Román 2005). It is highly plausible that similar masks were present on the final phase of the pyramid.

Evidence for ritual behavior in the form of an ash layer was present on the central staircase and in the corner excavations. In both the southwest and northwest corner excavations, the ash was uniform in color (10YR 4/1) and relatively uniform in thickness (10-17cm). The ceramic assemblages recovered from both corner excavations were dominated by Late Classic polychromes (see Chapter IV). However, the ash has a larger distribution on the southwest corner than on the northwest corner. In one unit, where the ash was most clearly associated with the architecture, the deposit contained large pieces of charcoal, something that was not recovered from within the ash layer on the northwest corner. Along the central staircase the ash was only found directly on top of Stela 5 and in the adjacent unit (SB-1C-15E) on top of a level area of the staircase.

Excavations at the Las Pinturas Reservoir

In 2004, San Bartolo study abroad student Theresa Hammer conducted a small excavation in a depression located off the southwest corner of the Las Pinturas platform (Hammer 2004) (**Fig. 3.6**). This depression, which we suspected was a reservoir, is round in shape and measures approximately 8m in diameter. Hammer placed a 1 x 6 m unit in the center of the pit with the goal of determining its function and chronological history.

The excavation was divided into five separate levels (SB-1F-1, -2, -3, -4 and -5) separated by approximately 1 meter. SB-1F-1 was the humus layer and yielded 260 sherds, 170 fragments of chert, and one chert eccentric. In SB-1F-2 and SB-1F-3, parts of bedrock were exposed only a handful of artifacts were recovered. SB-1F-4 yielded much more interesting finds. Hammer (2004) reported finding a layer of ash in this level, along with *incensario* (incense burner) fragments and a clear line of large limestone blocks oriented E-W. From this level, Hammer recovered 277 sherds (a mix of Late Preclassic and Late Classic types), 112 lithics, and one obsidian blade. The final level, which went down to bedrock across the entire unit and encompassed the very base of the depression, yielded more ash and 71 sherds that included *incensario* fragments and Saxche Palmar polychromes (Castillo and Sagebiel 2004). There was evidence for some modification of the bedrock in the central area of the depression.

The presence of Saxche Palmar polychrome sherds at the lowest level of the excavations suggests that the reservoir was in use during the Late Classic period. However, the fact that the area was not being used in any kind of civic-administrative sense during the Late Classic, suggests that the reservoir was not maintained during this period. Furthermore, Nick Dunning (personal communication 2008) has suggested that the lack of sediment in the reservoir indicates that it did not hold water in the Late Classic. As such, it may have simply served as a receptacle for offerings. This notion is supported by the presence of *incensario* sherds at the lowest levels. *Incensarios*, which were manufactured for the explicit purpose of burning incense,

were unequivocally ritual in nature (e.g. – Goldstein 1977; Rands and Rands 1959), something that cannot be said for any other class of ancient Maya pottery.

Excavations at Structure 4

Structure 4 is the largest of the four buildings that share the Las Pinturas plaza with the pyramid (**Fig. 3.6**). Structure 4 is situated directly west of the pyramid on the opposite side of the plaza. Excavations were carried out here in order to address the distribution of the ash layer within the whole architectural group. Excavations at Structures 3 and 5, which flank Structure 4 (Urquizú 2002; Escobar 2002) did not yield evidence for deposits of ash, but the investigations did not entail exposing large portions of the building façade.

I first placed a 5 x 2 meter trench (SB-2C-2) that ran from the Las Pinturas plaza to Structure 4. I exposed a badly deteriorated plaza floor in the entire trench. The floor is better preserved at the very base of the structure, and clearly lips up to the bottom course of stones. The front of Structure 4 was found on the west side of SB-2C-2. Excavations below the humus layer recovered 105 sherds (a mix of Late Preclassic and Late Classic types) and 2 chert flakes.

I then excavated two trenches (SB-2C-3 and SB-2C-4) that each measured 1.5 x 4 meters and ran along the north-south axis of the structure. SB-2C-3 ran north and SB-2C-4 ran south, but the two excavations essentially formed a contiguous trench that exposed the entire building façade, including the northeast and southeast corners. The front of the building consists of one row of outset stones below a 1 meter tall

platform (**Fig. 3.17**). The structure was much better preserved on the northeast façade than on the southeast façade. The SB-1C-3 excavations below the humus layer yielded 39 sherds (a mix of Late Preclassic and Late Classic types), 3 obsidian blades, one sample of modeled stucco and one marine shell. Excavations below the humus layer in SB-1C-4 recovered 95 sherds (a mix of Late Preclassic and Late Classic types), two chert knife fragments, 1 obsidian blade, two samples of modeled stucco and one *metate* fragment.



Fig. 3.17: Structure 4 Northern Façade

The excavations at Structure 4 established that an ash layer was not present on this building. Furthermore, while the building was peppered with some Late Classic sherds, the ceramic assemblage from Structure 4 is only a fraction of that which was found along the façade on the Las Pinturas pyramid (see Chapter IV). Again, excavations at Structures 3 and 5 did not expose deposits of either ash or ceramics.

This suggests that the activities that resulted in the unique layer of ash and pottery at Las Pinturas were not random or without larger meaning, but rather that the pyramid was selected for these activities while the other structures in this group were not.

Excavations at Las Ventanas

Las Ventanas (Structure 20) is the larger of San Bartolo's two main pyramids. It occupies the entire northern side of the site's main plaza (**Fig. 3.1**). Excavations on the front façade of this structure were carried out in order to expose the building face and look for the presence of an ash layer similar to that which was found at Las Pinturas. In 2004, Monica Urquizú exposed the front of the building, but her excavations did not wrap around the façade to encompass the corners. My excavations on the Las Ventanas corners involved re-opening Urquizú's units and extending them to expose the building corners (**Fig. 3.18**).

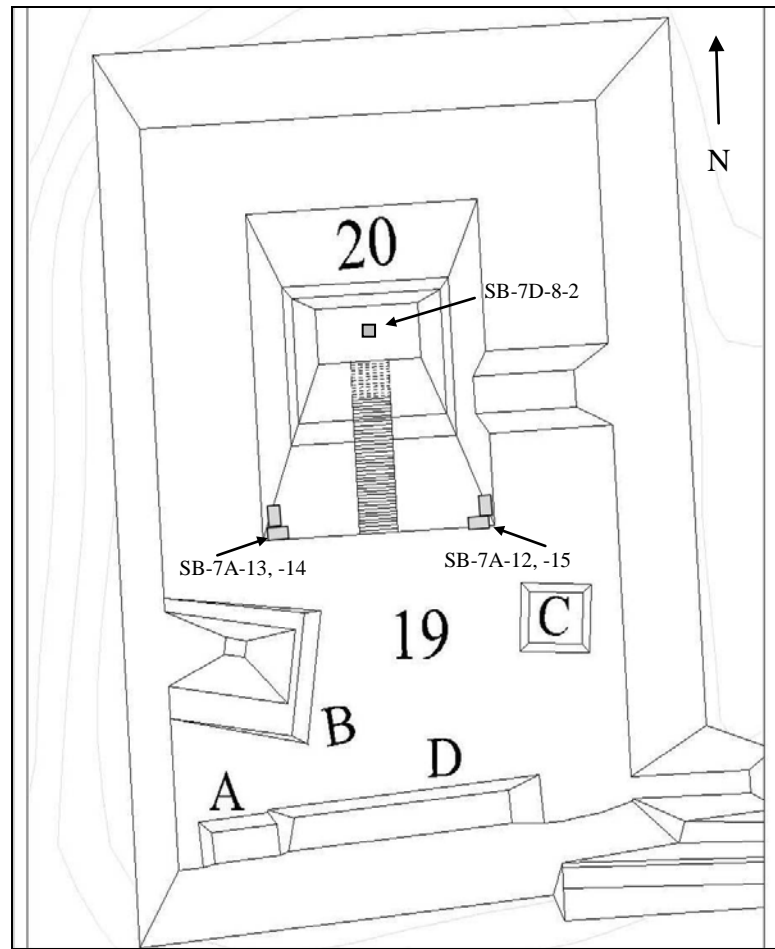


Fig. 3.18: Las Ventanas Platform with 2005 Excavations on the Pyramid Façade.

In the SB-7A-13 excavations, I placed was an E-W 2 x 1 m trench on the southwest corner in order to remove the backfill from the 2004 excavations and re-expose the architecture. I uncovered a low platform along the north side of the unit. SB-7A-14 (**Fig. 3.18**) was a new excavation (N-S, 2 x 1 m) that extended north following the platform. I encountered a layer of ash at approximately 10 cm above the building.

The architecture consisted of a one course of outset stones and what could be a low platform on top (**Fig. 3.19**). No artifacts were recovered from SB-7A-13, as it

was backfill. Excavations below the humus layer in SB-7A-14 recovered 20 sherds (a mix of Late Preclassic and Late Classic types), one carbon sample, and one sample of ash.

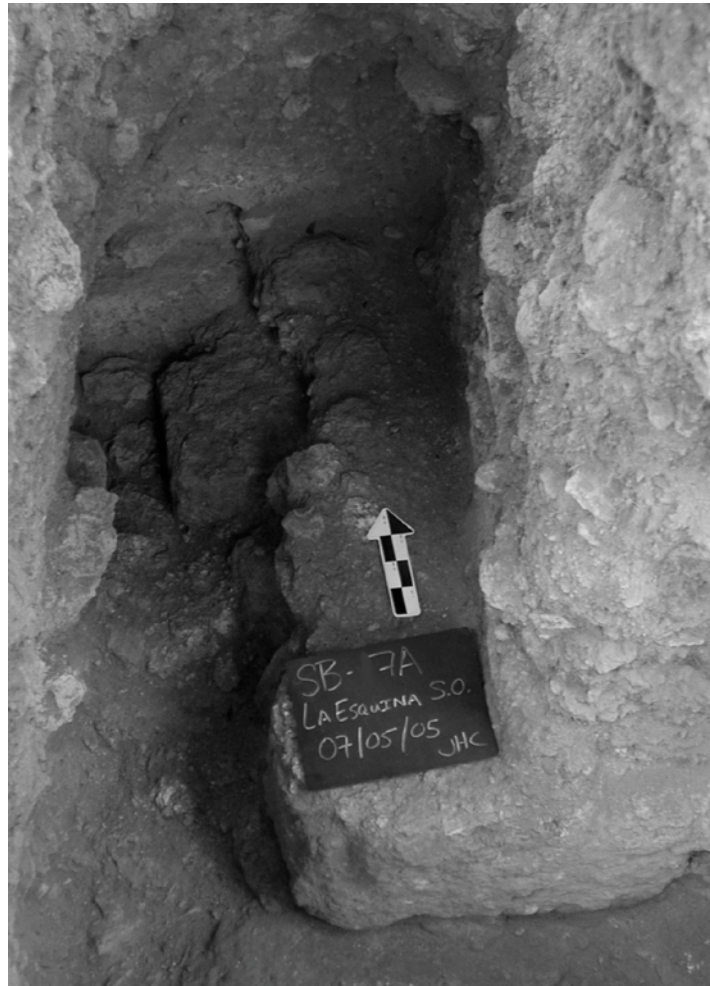


Fig. 3.19: SB-7A-13 & -14, Southwest Corner

In the SB-7A-12 excavations, I placed a E-W 2 x 1 m trench on the southeast corner of Las Ventanas in order to remove the backfill from the 2004 excavations and continued down to the plaza floor (**Fig. 3.18**). The architectural findings were very similar to those from the southwest corner excavations (**Fig. 3.20**). After re-exposing the building façade, I placed a N-S 2 x 1 meter unit (SB-7A-15) on the north side of

SB-7A-12. In SB-7A-15, I exposed the southeast corner and a deposit of ash that contained abundant charcoal. The ash was also approximately 10 cm above the architecture. No artifacts were recovered from SB-7A-12, as it was backfill.

Excavations below the humus layer in SB-7A-15 recovered 67 sherds (a mix of Late Preclassic and Late Classic types), one chert knife, one carbon sample, and one sample of ash.



Fig. 3.20: SB-7A-12 & -15, Southeast Corner

For the sake of time, excavations did not expose more of the Las Ventanas façade. It should be noted here that the ash recovered from the two pyramids differ somewhat in terms of both context and content. While the ash was present very close to the Las Pinturas architecture, at Las Ventanas there is a layer of soil and debris approximately 10 cm in thickness that separates the ash from the building itself. While at Las Pinturas the ash is present in a clear layer that at times covers one or

more square meters, the ash deposit at Las Ventanas is considerably more sparse, and occurs in small deposits. Furthermore, while the ash at Las Pinturas was very fine and lacking in charcoal, the ash collected from the southeast corner at Las Ventanas contained many large pieces of charcoal. Nevertheless, the presence of ash in very similar locations at both Las Ventanas and Las Pinturas is compelling, and prompted a comparison of the ash layers at the microscopic level (see Chapter V).

Room 1

I did not encounter deposits of ash during the excavations in the room at the summit of the Las Ventanas pyramid. However, these investigations will be reported here as they did yield some interesting evidence for Late Classic ritual behavior. I conducted excavations below the floor of Room 1 in order to investigate potential cache locations. Excavations at the four corners of the room did not expose evidence for ceremonial deposits of any kind. However, one excavation along the centerline of the room (SB-7D-8-2), where there was a clear cut in the plaster floor, yielded evidence for a possible disturbed cache (**Fig. 3.17**).

The cut in Ventanas Room 1 was 40 cm in diameter, and was the top of a circular hole that continued down 80 cm below the structure floor. Based on the fact that compact masonry fill was found below the floor in all the other excavation units in Room 1, the hole had clearly been carved out and then refilled in antiquity. The hole primarily contained very loose earthen fill. However, in the lower half of the cut (between 40cm and 80cm below the floor of the room), I recovered 19 sherds (a mix

of Late Preclassic and Late Classic types), 9 obsidian blades, two chert knife fragments, four fragments of greenstone (less than 1cm in length), 1 small piece of jade (also less than 1cm in length), three marine shells, and one fragment of spondylus shell. With the exception of the obsidian, all the materials recovered from this hole were the partial remains of some larger object or objects. The sherds, while they were also fragmentary, dated the cut to the Late Classic. Given the fragmentary, but somewhat valuable nature of the items recovered from within this hole, one interpretation of these finds is that they represent a looted cache. Alternatively, the materials may have been offerings themselves. Regardless, given that the ceiling of Room 1 and portions of the corbel vault had fallen in on top and buried this deposit in antiquity, it is apparent that the Maya were responsible for the activity surrounding the fragmentary finds. Moreover, the presence of only very loose earthen fill and the absence of any building debris in the 40cm area above the artifacts suggests that the Maya deliberately filled the hole when they were finished either interring or removing objects from the hole in the floor.

Structure 157A

Group 157 is a small residential complex located 350 m south of the pyramid Las Pinturas (**Fig. 3.1**). The group consists of three structures that surround a central courtyard. Structures 157B and 157C are L-shaped buildings, and Structure 157A is a larger square building. I conducted excavations at Structure 157A in 2005 with the goal of investigating possible ritual behavior, specifically to look for the presence of

ash, in a household context. I chose this particular structure because it was clearly larger and distinct from surrounding buildings, and thus had the potential to be a kind of household shrine.

The goal of the excavations at Structure 157 was to expose the surface of the group's main building (157A). Excavations began with two E-W 2x1 meter trenches that were placed at the northwest and southwest corners of the building (the two plaza-facing corners). In these two units (SB-22A-1 and SB-22A-2), I exposed a badly eroded plaza floor and the front façade of Structure 157A. I recovered 115 sherds (a mix of Late Preclassic and Late Classic types) and two obsidian blades from SB-22A-1. From SB-22A-2, I recovered 301 sherds (a mix of Late Preclassic and Late Classic types) and 1 ceramic ocarina (whistle).

I opened unit SB-22A-3, a N-S 2x1 m trench, in order to follow the architecture exposed in SB-22A-2. Excavations in this trench uncovered a course of three aligned stones that ended on the north side of the unit. There were abundant sherds recovered in SB-22A-3, although I interpret their presence as the result of building collapse and not as any kind of offering. In total, 788 sherds, along with five obsidian blades and one chert knife fragment were recovered from SB-22A-3. Unit SB-22A-4 was a 1x1 meter unit that was placed on the north side of SB-22A-1. The southwest corner of the structure was found at the junction of these two units, but no other intact architecture was identified. A total of 335 sherds were recovered from this unit.

Little could be learned architecturally about Structure 157A from these excavations, as it was abundantly clear that the building was very badly destroyed. Furthermore, I did not uncover any evidence for ceremonial practice during these excavations. However, the absence of evidence for the deposition of ash in this non-elite domestic context perhaps provides some indication about the spatial limits of this behavior at the site.

Palace: SB-8D-33

The Palace Tigrillo is a large structure located on the west side of San Bartolo's main plaza (**Fig. 3.1**). Extensive excavations were conducted by Astrid Runggaldier at the Palace Tigrillo from 2003-2006. This structure, which has been interpreted as San Bartolo's royal palace, is among the largest buildings at the site and has both Late Preclassic and Late Classic components (Runggaldier 2009). The 2005 investigations exposed large portions of the final Late Classic phase of the structure. Runggaldier placed a series of units along the structure platform's N-S façade from the central E-W axis to the southeast corner. In one of the excavation units, SB-8D-33, Runggaldier exposed a layer of ash and collected it for analysis.

SB-8D-33 was a small 1m x .5m unit that Runggaldier placed along the last in the series of outset corners on the southeastern façade of the building. The ash, which she describes as lacking in visible carbon, was found in association with the corner (Runggaldier 2009). The ash deposit was one of three that were found in this area of excavation. The other two were found along a small lateral staircase (SB-8D-25) and

atop a terrace at the summit of this staircase (SB-8D-31). The ash from SB-8D-33 was chosen for phytolith and pollen analysis over the other two ash samples due to the large quantity that was collected.

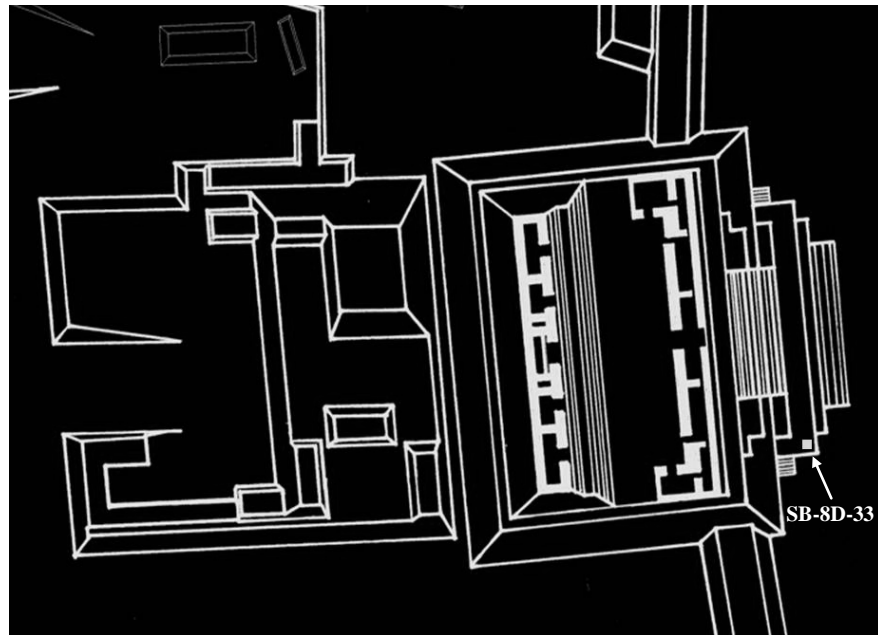


Fig. 3.21: Palace Tigrillo Plan (SB-8D-33)

Conclusions

The discussion above has presented the finds from a number of highly varied contexts across San Bartolo. In regards to the potential ceremonial features, it is interesting to note that a great deal of variation exists between the specific archaeological contexts themselves. For example, Structure 63 was a building both constructed and used during the Late Classic period. In contrast, Las Pinturas was a Late Preclassic structure that was reused solely as a place for possible offering activity during the Late Classic. The pyramid Las Ventanas and the Palace Tigrillo both exhibit potential ceremonial activity in the form of ash deposits, but these

structures also both show clear evidence that they were remodeled and actively used for civic and residential purposes during this time. Therefore, while Late Classic religious rites of some kind likely occurred at each of these buildings, the structures themselves were in varying stages of use and disrepair. Structure 63 was relatively new, Las Ventanas and the Palace Tigrillo were remodeled significantly, and Las Pinturas was a dilapidated ruin. These notions will be returned to in subsequent chapters, but needless to say, the state of these buildings have profound implications for their treatment and ultimately the way they were perceived of by the Late Classic Maya of San Bartolo.

While the investigation into ritual behavior was the main thrust of these excavations, several contexts did not show any evidence for this type of activity. The absence of ceremonial activity at other excavations effectively assists in fleshing out broad patterns of ritual behavior at the site. For example, excavations at Structure 157A, which did not yield any evidence for offerings of any kind, indicates that perhaps the ritual behavior that resulted in the deposits of ash and ceramics was limited to public structures. Furthermore, the absence of offerings at Structure 4, situated just across the plaza from Las Pinturas, illustrates the pyramid was treated in a specialized manner relative to other nearby buildings. Again, this suggests that certain structures were deliberately utilized for potential ceremonial activity, while others were not chosen as appropriate locations for these events.

The archaeological finds described above provide just one body of data from which to approach religious behavior at San Bartolo. When the archaeological

information is considered along with the ceramic assemblages and paleoethnobotanical remains from each context some very clear patterns emerge. These other two lines of evidence will be discussed in detail in subsequent chapters before all three bodies of data are brought together in Chapter VI.

Chapter IV

The Ceramics

Ceramic vessels and sherds comprise one of the most durable bodies of evidence recovered from archaeological excavation. In Maya archaeology, and indeed the archaeology of all ancient pottery-producing communities, ceramics make up a significant portion of the artifactual assemblages. Since the project's inception, the excavations at San Bartolo have yielded abundant ceramic data. The pottery is stored at the project lab house in Antigua, Guatemala, where the vast majority of analysis occurs. Due to the sheer bulk of ceramic material that is collected each year and the time constraints of our lab season, most of the pottery undergoes a primary analysis only. This entails sorting the sherds according to the type-variety system (see below), weighing them, cataloging them, and bagging them for storage. At the most basic level, primary analysis provides useful information on chronology, function, and social status. However, as this work illustrates, when ceramic data is considered in conjunction with other lines of evidence like archaeological context, associated paleoethnobotanical finds, and modern ritual practice, it can be a proxy measure for a whole host of complex behaviors.

This chapter will present the results of primary analyses conducted on the pottery that was recovered from most of the excavations discussed in Chapter III. Furthermore, it will explore the results and implications of this data both within and

across these archaeological contexts. By comparing and contrasting the ceramics from each archaeological context, I will flesh out the ceremonial nature of some of the ceramic deposits. Refitting experiments were attempted on the Las Pinturas and Structure 63 assemblages and will be discussed briefly as well. The refitting also contributes to a larger understanding of the ritual use of ceramics at some locales. Ultimately, the ceramic data presented here becomes highly useful for addressing ritual behavior site wide at San Bartolo.

Type-Variety Method of Classification

The type-variety method has been employed almost exclusively in the classification of ceramic assemblages at San Bartolo thus far. The type-variety method is a hierarchical system of ceramic classification, whereby sherds are assigned to a series of categories. Each sherd is first assigned to a ware, the most general and largest of the categories, then a group, then a type, and then possibly a variety, the most narrow or specific grouping. Sabloff and Smith (1969) made important headway in defining the type-variety system and provided the following definitions: 1) A ware is determined by paste and surface finish; 2) A group is a collection of related types that portray similarities in surface finish and form; 3) A type is determined sometimes by decorative technique and other times by vessel form. 4) A variety is determined by significant but small variations within a type that are often highly localized and may even be unique to one site.

The pros and cons of typologically-driven classification systems have long been a matter of some debate. The biggest drawback of these methods is the inevitable loss of variability that results from grouping objects into predefined categories. However, another weakness of type-variety is that there is an inevitable degree of subjectivity employed in the formation of ceramic types. Indeed, it has been argued that types are nothing more than inventions of the ceramicist and in no way represent the past (Rouse 1969). This “real vs. invented” issue was a classic point of contention that accompanied the emergence and development of the type-variety method (Ford 1954; Smith *et al.* 1960; Spaulding 1953, 1954). In this debate, the type-variety method was contrasted with the modal approach to ceramic analysis. A modal analysis is one that is decidedly non-hierarchical and is based on individual attributes or groups of attributes called *modes*. Rouse (1969) defines two different types of modes: “conceptual” and “procedural.” Conceptual modes are those artistic attributes of decoration and design that are chosen by the artist, whereas procedural modes are the product of variation in manufacturing techniques. Generally speaking, a modal approach is one that considers all or most of the variability within a collection, while type-variety arranges the characteristics according to importance or distribution across the sherds. As such, the specific research questions involved define the appropriateness of one approach to ceramic classification over the other. The downfall of a modal approach is that the variation expressed is so great that it is often difficult to compare one collection to another. With type-variety, on the other hand, the investigator will lose some variability, but the norms of this classification

system allow for better comparison not only over time, but also across a geographic region. While the system has room for improvement and “lumping” does occur, ceramicists use the creation of new varieties to express greater variability within the assemblages of their site. Sabloff and Smith (1969: 284) have emphatically defended the use of the type-variety method: “Although the type-variety system is basically typological in nature, it has absorbed some of the merits of modal analysis and has discarded some of the weaknesses of typological or taxonomic analysis.”

If we can move past our own desire as archaeologists to mimic the past, and instead think about types as highly useful analytical tools, the value of type-variety is abundantly clear. The benefit of the type-variety approach is that, when properly applied to a given ceramic assemblage, it can allow the researcher to look at variation across time and space. It is the very loss of variation that enables us to successfully characterize and communicate about the nature of a given ceramic assemblage.

It is for this reason that the type-variety approach has become the standard in Maya archaeology. This method was first applied to during investigations at Uaxactun and Barton Ramie, where the ceramic assemblages were large and diverse enough, “...so that the varieties and types present (could) be delineated with some reliability” (Smith *et al.* 1960). Subsequent application of the type-variety approach at Seibal (1975) and the published report from Barton Ramie (Gifford 1976) further established the classification system as the standard. It should be noted that in regards to the Seibal ceramics, Sabloff does incorporate a modal analysis, but that type-variety classifications are the main thrust of the report. Today, with the type-

variety approach firmly entrenched in Maya studies, and as new sites and new pottery styles continue to be discovered, this method becomes ever-more useful for addressing issues of continuity and change at the site or regional level. In the Petén, a number of seminal works continue to function as a baseline for understanding and describing new ceramic assemblages. The San Bartolo ceramic typology has been derived primarily from several major typologies across the region, namely Seibal (Sabloff 1975), Uaxactun (Smith 1955; Smith and Gifford 1966) and, to a lesser degree, Altar de Sacrificios (Adams 1972) (**Table 4.1**).

These three typologies exhibit considerable overlap. For example, Sabloff considers Late Classic Tepejilote phase at Seibal to be part of the larger Tepeu sphere that was first established at Uaxactun. He further asserts that, “the bulk of the Tepejilote material shows many resemblances to the Tepeu 2 complex at Uaxactun and the Pasion complexes at Altar de Sacrificios” (Sabloff 1975: 15). It should be noted that the San Bartolo phase sequence is still a work in progress. While the Late Preclassic phases have been very well defined (Castillo 2005, 2007), the Late and Terminal Classic phases are still being fleshed out (Castillo, personal communication 2009).

The type-variety approach is used almost exclusively in the analysis of ceramics from San Bartolo. The project ceramicist, Patricia Castillo, has been very conscientious about recognizing uniqueness within the San Bartolo assemblage. As such, her work with the ceramic assemblage at San Bartolo has yielded a number of new varieties. For example, we have found inclusions of chert in certain types that are generally typified by calcite temper (Castillo, personal communication 2005). The discovery of several large workshops in the San Bartolo site core along with a quarry found in the peripheral zone suggest that the manufacture of chert tools factored prominently into the economy at San Bartolo (Kwoka 2006). Thus the use of this material as temper in types that usually do not contain chert is a logical outcome of the natural resources available in the site area. Using the type-variety system, we were able to acknowledge and record this anomaly by creating new San Bartolo varieties within pre-established regional types.

The following is a review of the major wares, groups, and types that are relevant to the discussion of the assemblages featured here, and thus will include only Late Classic ceramics. More thorough coverage of the San Bartolo typology is available elsewhere (Castillo 2005; Castillo 2007).

Cambio Group

The Cambio Group falls within the Uaxactun Unslipped Ware. Unslipped utilitarian vessels that were likely restricted to the functions of cooking and storage characterize this ceramic group. The group was first established by Smith and Gifford (1966: 169) from their work with the Uaxactun assemblage. At San Bartolo, Cambio pastes are generally coarse-grained with calcite temper and are grey in color. There are number of discrete types within the Cambio Group, the most common of which are Cambio Unslipped and Encanto Striated. The Cambio Unslipped type tends to be smoothed on the surface. The most common forms are large bowls and jars (**Fig. 4.1**). Vessels of the Encanto Striated Type have parallel striations of



Fig. 4.1: Cambio Group Rim Sherds (from Structure 63)

varying directions and thicknesses on the outside of the body, usually beginning just below the neck (**Fig. 4.2**). Jars are almost exclusively the only type represented at San Bartolo. Sabloff (1975) found this to be true with the Seibal Encantos as well. Chronologically, the Cambio group is broadly defined as both a Late and Terminal Classic phenomenon, as sherds and vessels been identified in abundance across the Tepeu phase at Uaxactun and in both the Tepejilote and Bayal phases at Seibal.



Fig. 4.2: Encanto Striated Rim Sherd (from Structure 63)

Saxche and Palmar Groups

The Saxche and Palmar Groups fall within the Peten Gloss Ware. Smith and Gifford (1966: 172) first established these two groups from the ceramic assemblages at Uaxactun. At San Bartolo, the majority of the polychromes are in such a poor state preservation that it is very difficult to discern between these two ceramic groups. It is

for this reason that we have merged the two in the site's ceramic typology. The Saxche-Palmar group is typified by fine pastes that are pink to tan in color. Saxche-Palmar vessels come in varying forms, including plates, bowls, cylinder vessels, and, less frequently, jars. Generally speaking, the highly visible areas of the vessels are always slipped, whereas the less visible areas, such as the base and feet, are often unslipped. The slipped and painted designs on the vessels are multi-colored and range from simple concentric bands to vivid imagery. Short descriptive texts are sometimes rendered along the rim of the vessels.

Saxche-Palmar vessels were clearly manufactured by artisans for the elite and functioned as serving wares or ritual objects (indeed, perhaps certain vessels functioned as both during their "lifetime"). Furthermore, it has long been accepted that Saxche-Palmar polychrome pottery functioned as prestige items among the Late Classic elite (Reents-Budet 1994; Sharer 2006). These specialized ceramics have been described as a kind of "social currency" by which the upper echelons of Maya society could maintain and communicate their influence and power (Reents-Budet 2008; Reents-Budet *et al.* 2000).

The Saxche-Palmar group encompasses a number of discrete types, each defined by color, decoration, or both. Due to the eroded nature of many of the sherds in this group, however, assigning types can be difficult. For this reason, we often assign sherds the general name "Eroded Polychrome." Sabloff (1975: 125) also laments this issue in his description of the Seibal ceramic assemblage. Whenever possible, however, types are assigned. The most common Saxche-Palmar type

represented at San Bartolo is Zacatel Cream. Zacatel is characterized by a cream slip applied as a base for subsequent layers of color and design (**Fig. 4.3**).



Fig. 4.3: Zacatel Cream Partial Vase (from Structure 63)

Saxche-Palmar sherds and vessels can be quite helpful in establishing and refining chronologies. At Uaxactun (Smith and Gifford 1966), Seibal (Sabloff 1975), and Altar de Sacrificios (Adams 1971) Saxche-Palmar polychromes are decidedly a Late Classic phenomenon and are conspicuously absent by shortly after A.D. 800. At Altar de Sacrificios and Uaxactun, Saxche-Palmar cream-base vessels, like Zacatels, tend to characterize the Late Facet Pasion (A.D. 710-760) and Tepeu 2 (A.D. 670-830) phases, respectively. Therefore these vessels typify the middle to late part of the Late Classic. At Seibal, while no concrete chronological divisions could be made,

Sabloff (1975:125) does note that the frequency of cream-base sherds was higher in the upper levels than in the lower levels in Late Classic contexts. As such, Zacatels and other cream-based polychrome types tend to range from about A.D. 670-830.

Tinaja Group

The Tinaja Group falls within the Peten Glossy Ware. It was also first defined by Smith and Gifford (1966: 172). This group is characterized by a red slip applied to some portion of the vessel. At San Bartolo, Tinaja shows a lot of variation in both paste and form. The Subin Red and Chaquiste Impressed Types are very well represented at the site. They are characterized by coarse-grained paste and almost exclusively take the form of very large bowls. The bowls often exhibit thickened rims that are slightly incurved. The application of the paste varies from very thick, covering the entire interior and exterior of the bowl, to very minimal, such that the lower half of the vessel is entirely unslipped. The major difference between these two types is that Subin has an incised line just below the lip and Chaquiste has some kind of stamping below the lip (**Fig. 4.4**). The stamped designs vary considerably, but typically form a wavy line.

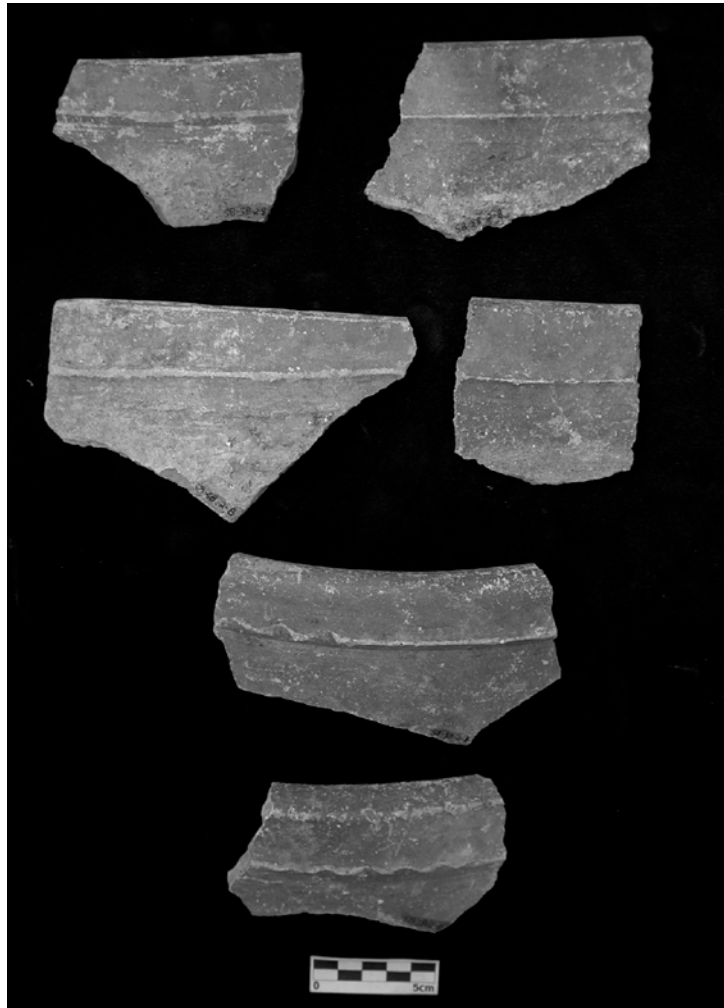


Fig. 4.4: Tinaja Group Rim Sherds (from Structure 63).
The top 4 sherds are Subin and the bottom 2 sherds are Chaquiste.

The Tinaja Red Type is also fairly well represented within the Tinaja Group at San Bartolo. These sherds are also characterized by the same red slip, but tend to have a finer paste than Subins or Chaquistes. Relative to these latter types, Tinaja Reds tend to be thinner-walled and the slip is applied quite liberally, covering all visible parts of the vessel. The forms include plates, bowls and sometimes jars (**Fig. 4.5**).



Fig. 4.5: Tinaja Red Bowl and Plate (From Structure 63)

Given the variation in paste and form that is exhibited across the Tinaja Group, assigning any kind of group-wide function is somewhat difficult. Sabloff (1975) does not indicate the function of the Seibal Tinaja Group vessels, but does note that they tend to be smaller than Cambio Group vessels of the same form. He concludes that this, "...probably represents a functional difference, although there are no obvious differences in association or contexts of the types" (1975: 160). Triadan (2000) has indicated that Tinaja Group jars were used for storage in elite houses at Aguateca. In contrast, in their discussion of a potential feasting deposit at Blue Creek, Clayton *et al.* (2005: 127) describe Tinaja Group jars as "small serving vessels." Given the variation within the Tinaja Group, it is likely that they functioned in both capacities. Sullivan (2002) in her discussion of burial offerings from Dos Hombres, states that Subin Red is a utilitarian type, much like local Cayo Unslipped wares. While it is tempting to distinguish function based on type within the Tinaja Group based on, for example, paste and slip, the variation *within* the Subin and Chaquiste types, at least at San Bartolo, discourages this. It therefore seems that the

best avenue for addressing the use of Tinaja Group vessels is to contrast them with the Cambio and Saxche-Palmar Groups. Tinaja pots were clearly finer than Cambio vessels, but may well have been used for the storage in elite households, as Triadan (2000) has suggested. However, Tinaja Group vessels are clearly not as fine as those of the Saxche-Palmar Group, and were likely not manufactured strictly for ritual purposes or prestige.

Much like the Cambio Group, the Tinaja Group is a cross-over category from the Late Classic to the Terminal Classic periods. At Seibal, Sabloff notes that these sherds and vessels are indistinguishable across this time span. We have found this to be true at San Bartolo as well and have generally assigned the broad date of A.D. 600-900 to sherds and vessels of the Tinaja Group.

The San Bartolo Ceramic Data

The discussion that follows will summarize the primary analysis results from the ceramic assemblages recovered from each of the excavations discussed in detail in the previous chapter: Structure 63, Las Pinturas, Las Ventanas, Structure 4, and Structure 157A. Beyond reporting the ceramic data, this section will examine patterns that are evident across the five assemblages, address issues of chronology, and explore potential behaviors that are evident from the pottery itself.

Before continuing, a few notes should be made about the tables below (Tables 4.3-4.8). The categories of “Petén Gloss: various Early Classic” and “Petén Gloss: various Late Classic” were created to simplify the discussion of the ceramic

assemblages. They do not represent actual ceramic groups or types. The Early Classic category includes Aguila Orange, Dos Arroyos Polychrome, Balanza Black and Pucté Brown. The Late Classic category encompasses Achote Black, Cubeta Incised, Azote Orange, and Infierno Black. None of these individual groups and types figures prominently in any of the assemblages discussed here.

In addition, the time periods in Tables 4.3-4.8 are abbreviated for issues of space.

Table 4.2 provides more information on these abbreviations.

Abbreviation	Time Period	Date Range
LPC	Late Preclassic	400 B.C.-A.D. 200
EC	Early Classic	A.D. 200-600
LC	Late Classic	A.D. 600-800
TC	Terminal Classic	A.D. 800-900

Table 4.2: Time Periods at San Bartolo

Structure 63

Primary analysis on the Structure 63 ceramic assemblage was conducted by Kerry Sagebiel, Caitlin Walker, and myself during 2003 and 2005. A thorough discussion of the ceramic assemblage has been presented elsewhere (Craig 2004; Sagebiel and Castillo 2003). Table 4.3 presents the proportions of ceramic groups/wares identified during primary analysis. Not all the Structure 63 excavation units are represented in Table 4.3. Unit SB-3B-4 was left out of this summary of the data because it did not encompass the offering and Unit SB-3B-1 was excluded as it represents disturbed material recovered from a looter's trench (see Chapter III for details on these excavations).

Group/Ware	Date	Frequency (n)	Total Weight (g)	Proportion by Weight
Achiotes/Quintal	LPC/EC	234	3724.5	1.88%
Paso Caballo Waxy	LPC	646	10900.9	5.5%
Petén Gloss: various Early Classic	EC	20	795.6	0.4%
Cambio	LC/TC	3440	94410.1	47.8%
Petén Gloss: various Late Classic	LC	104	4588	2.3%
Tinaja	LC/TC	1745	65710.4	33.3%
Saxche Palmar	LC	225	11358.2	5.8%
Eroded	n/a	402	5907.1	3%
		6816	197394.8	100%

Table 4.3: Primary Analysis Results from Str. 63 (units SB-3B-2, -3, and -5)

Chronologically, the Structure 63 assemblage is somewhat mixed, but clearly Late to Terminal Classic ceramic groups (Cambio and Tinaja) dominate the assemblage. The small presence of Late Preclassic sherds is best explained as the reuse of sherds and perhaps building fills in the construction of Late to Terminal Classic architecture, a practice that was very common at San Bartolo and is evident at the Palace (Runggaldier 2009) and Las Plumas (Ortiz and Mencos 2004). However, the Late to Terminal Classic range for activity at Structure 63 can be further refined. While Cambio and Tinaja Group vessels are characteristic of this entire span, there is a conspicuous absence of types that are unique to the Terminal Classic period at Structure 63. During Seibal's Bayal phase (Sabloff 1975) and Uaxactun's Tepeu 3 phase (Smith 1955), fine paste wares like Altar Orange, appear at the beginning of the 9th century and are generally associated with the Terminal Classic period. According to Smith (1958), Uaxactun Fine Orange, a type that he describes as marking the transition between the Late Classic and Early Postclassic periods, has a wide distribution that stretches as far as Palenque, Piedras Negras, and Benque Viejo in

Belize. Furthermore, as discussed above, Saxche-Palmar Group Polychromes are distinctly a Late Classic phenomenon. While polychromes only make up a little more than 5% of the Structure 63 assemblage, their presence, along with the lack of fine paste wares in the deposit, indicates that the feature was formed between A.D. 600-800. Moreover, the significant presence of Zacatel Cream sherds provides some indication that perhaps the ceramics were interred during the even narrower date range of A.D. 670-800 (**Table 4.4, Figs. 4.6 & 4.7**).

Type (Saxche Palmar Group)	Date	Frequency (n)	Total Weight (g)	Proportion by Weight
Eroded Polychrome	LC	190	8540	75%
Palmar Orange	LC	4	250.8	2.2%
Zacatel Cream	LC	19	1758.7	15.4%
Grey/Brown Base	LC	2	15.1	0.1%
Black-on-Red	LC	5	396.1	3.5%
Black-on-Cream	LC	5	427.5	3.8%
		225	11388.2	100%

Table 4.4: Saxche-Palmar Sherds from Structure 63

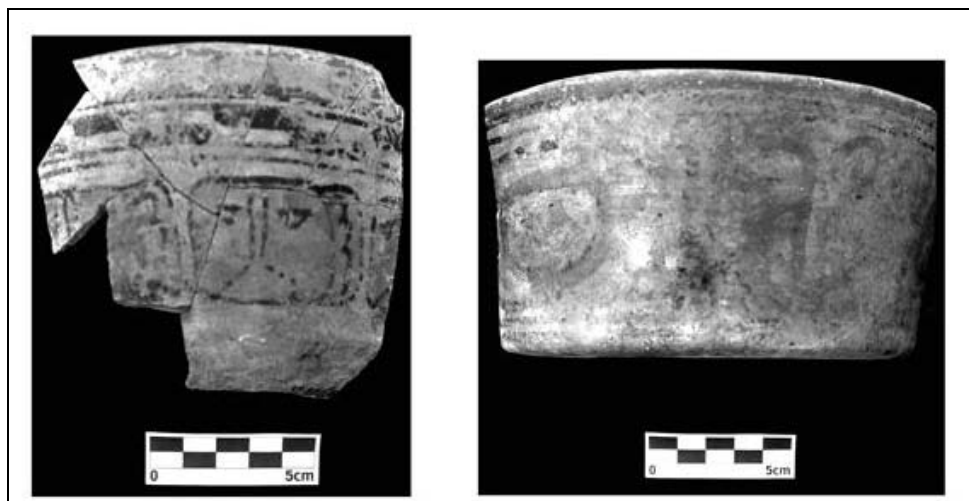


Fig. 4.6: Zacatel Cream Partial Vessels From Structure 63



Fig. 4.7: Zacatel Cream Sherds From Structure 63

The size and diversity of the Structure 63 assemblage along with the fact that the sherds themselves, namely the polychromes, were generally well preserved provides a unique opportunity to derive a fairly tight chronology of the deposit from ceramics alone. What can be said with relative certainty based on the pottery recovered at the structure is that the first ceramic offerings were made during the

beginning to middle of the 7th century and that by the early part of the 9th century the building had fallen into disuse.

The ceramic assemblage from Structure 63 also contains sherds that exhibit some very specific behaviors related to ritual practice. Bearing in mind that the deposit was recovered from inside a shrine (Chapter III) the evidence for burning on many of the sherds is indicative of the fact that the pottery itself was used in the rites that were performed at Structure 63 (**Figs. 4.8 & 4.9**). While no absolute percentage of burned ceramics is available at this time, this observation was made in the field by me during excavation and in the lab by all those that contributed to the analysis of this assemblage. Another compelling aspect of the Structure 63 assemblage, and one that sets it apart from all other contexts at the site, is the identification of several “kill holes” or “mending holes” on some of the sherds (**Figs. 4.9 & 4.10**).



Figs. 4.8: Burned Zacatel Cream



Fig. 4.9: Burned Zacatel with drilled hole



Fig. 4.10: Palmar Orange with drilled holes

The notion that these holes could represent the intentional effort to “kill” a vessel was perhaps first proposed by Smith (1932) in regards to polychrome pottery from Uaxactun. While kill holes are traditionally located at the base of the vessel (e.g. –

Varela 2003), they have been identified elsewhere on the pot. For example, according to Brady and Stone (1992), a gadrooned jar with a kill hole on the shoulder was found during investigations at Naj Tunich. However, it is also logical that the Maya could have drilled these holes in order to hold the vessel together with some kind of cordage. Indeed, mending holes near the rims of vessels have been found in abundance at sites in the southwest (e.g. - Senior 1995). This practice illustrates the efforts of individuals to preserve and reuse the vessel. It is difficult to unequivocally prove one function of these holes over the other in this case. The holes on the Structure 63 pottery may represent ritual action directly on the vessels themselves or they could suggest a clear effort by the Late Classic Maya to repair and maintain family heirlooms or otherwise valuable pots. Either way, the drilled holes represent an interesting set of behaviors. Perhaps with more intensive ceramic analysis on the Late Classic assemblages across the site, we will be able to establish patterns in the placement of mending and kill holes on the San Bartolo vessels.

Las Pinturas Facade

I conducted primary analysis on the Las Pinturas façade assemblage in 2005. A summary of the assemblage is presented in Table 4.5.

Group/Ware	Date	Frequency (n)	Total Weight (g)	Proportion by Weight
Achiotes/Quintal	LPC/EC	96	1117.1	3%
Paso Caballo Waxy	LPC	436	4729.8	13%
Petén Gloss: various Early Classic	EC	9	166.5	0.5%
Cambio	LC/TC	376	5410	15%
Tinaja	LC/TC	286	5287.4	14.5%
Saxche Palmar	LC	619	12170.6	33%
Eroded	n/a	614	7681.9	21%
		2436	36563.3	100%

Table 4.5: Primary Analysis Results of the Assemblages Recovered from the NW and SW Corners of Las Pinturas (SB-1C-7, -8, -9, -10, -11, -14, -16, -17, -18, -19, -20, -21, -22)

The ceramics are clearly mixed, but dominated by Late and Terminal Classic wares. Over 60% of the sherds date to the Late and Terminal Classic, while only about 15% of the assemblage dates to the Late Preclassic. This is a surprisingly low number of Late Preclassic sherds given that all of the pyramid's construction phases date to the Preclassic (see Chapter III). While this discrepancy could be partially explained by the large percentage of eroded sherds (21%) that was present in the assemblage, the vast quantities of Late and Terminal Classic pottery that were recovered from the face of Las Pinturas illustrate that there was a significant amount of activity occurring at the pyramid at this time. As with the Structure 63 assemblage, the timing of these events can be further refined by the presence of Saxche-Palmar Group polychromes and absence of fine paste wares recovered from the pyramid façade excavations. This suggests that the date range for the activity at Las Pinturas is about A.D. 600-800. Unfortunately the Saxche-Palmar assemblage is comprised entirely of eroded polychromes, so it is not possible to further refine this date range (**Fig. 4.11**)

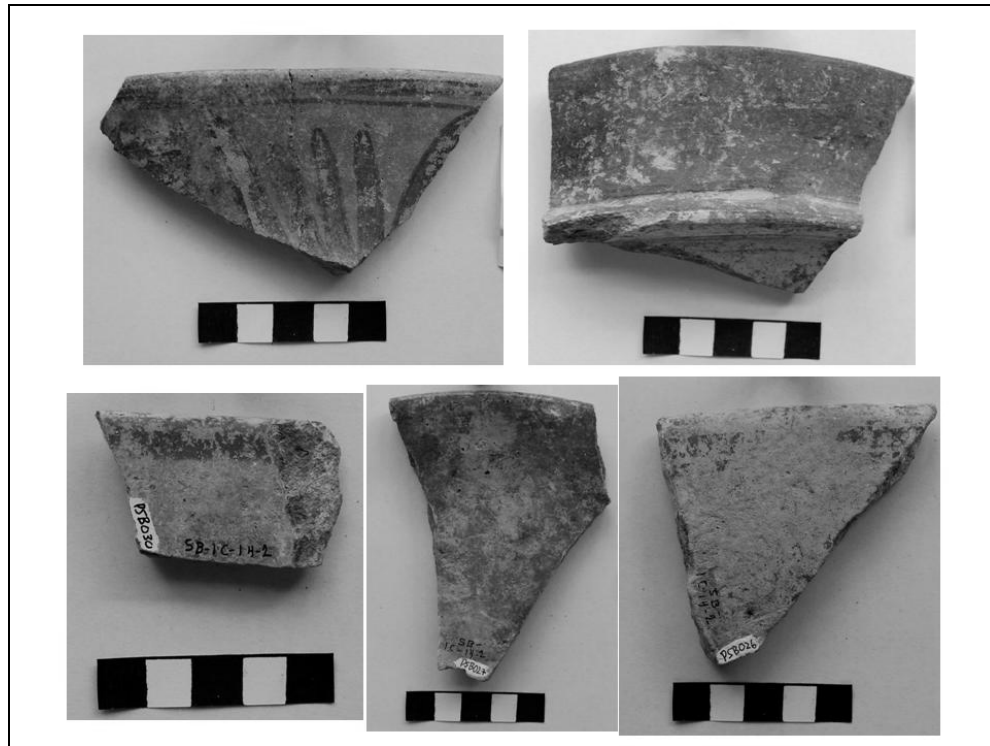


Fig. 4.11: Eroded Polychrome Rim Sherds from Las Pinturas

Las Ventanas

I conducted primary analysis on the ceramic assemblage from Las Ventanas Room 1 and the pyramid façade corners in 2005. Both excavations yielded very low numbers of sherds relative to the other contexts discussed here. The assemblage from Room 1 was so small (n=18) that it cannot contribute significantly to any kind of comparative discussion. As such, this data will not be addressed further. While the assemblage recovered from the southeast and southwest corners was also quite small (n=93), it has been included in this discussion as the context is very similar to the Las Pinturas corners. Table 4.6 presents a summary of the analysis.

Group/Ware	Date	Frequency (n)	Total Weight (g)	Proportion by Weight
Achiotes/Quintal	LPC/EC	2	11.9	1.5%
Paso Caballo Waxy	LPC	26	240	30.9%
Petén Gloss: various Early Classic	EC	0	0	0%
Cambio	LC/TC	12	136	17.5%
Tinaja	LC/TC	8	36.6	4.7%
Saxche Palmar	LC	0	0	0%
Eroded	n/a	45	352	45.3%
		93	776.5	99.9%

Table 4.6: Primary Analysis Results of the Assemblages Recovered from the Front Façade of Las Ventanas (SB-7A-14, -15)

The most significant characteristic of the Las Ventanas assemblage is the very high proportion of eroded sherds. Over 45% of the ceramics recovered from this excavation were unidentifiable. It is therefore rather difficult to make assertions about the nature of the assemblage. However, the conspicuous absence of Saxche-Palmar sherds is worth noting, particularly considering that they can often be identified even when very eroded by their distinctive pink paste. Chronologically, the assemblage is quite mixed. There is a very high proportion of Late Preclassic wares present among the sherds, but this is not terribly surprising given that all but one of the pyramid phases date to this time period. The presence of Cambio and Tinaja Group sherds again provides the broad date of A.D. 600-900, but the absence of Terminal Classic fine paste wares narrows this date range to the Late Classic. As with the Saxche-Palmar sherds, the paste of fine paste wares is distinctive enough to assert that they were not present at Las Ventanas. Therefore, much like Las Pinturas, the sherds were likely deposited on the building façade between about A.D. 600 and A.D. 800.

Structure 4

I conducted primary analysis on the assemblage recovered from the Structure 4 excavations during 2005 lab season. A summary of the results from this analysis is presented in Table 4.7. As with the Las Ventanas assemblage, almost half of the ceramics recovered

Group/Ware	Date	Frequency (n)	Total Weight (g)	Proportion by Weight
Achiotes/Quintal	LPC/EC	5	25.9	0.9%
Paso Caballo Waxy	LPC	71	524.9	17.5%
Petén Gloss: various Early Classic	EC	0	0	0%
Cambio	LC/TC	31	594.3	19.8%
Tinaja	LC/TC	28	310.6	10.4%
Saxche Palmar	LC	14	153.4	5.1%
Eroded	n/a	147	1387.1	46.3%
		296	2996.2	100%

Table 4.7: Primary Analysis Results for the Assemblage Recovered at Structure 4 (SB-2C-2, -3, & -4)

at Structure 4 were eroded to the point that they could not be identified. Again, this makes it difficult to interpret the nature of this assemblage. However, it is significant that there is a very low percentage of Saxche-Palmar sherds given the proximity of Structure 4 to Las Pinturas, where an abundance of polychromes was recovered.

Chronologically, the presence of Saxche Palmar Group sherds and absence of fine paste wares suggests a date of A.D. 600-800 for the activity at Las Ventanas. As with the Las Pinturas ceramics, the Saxche-Palmar Group sherds were too eroded to further refine this date.

Structure 157A

I conducted the primary analysis on the ceramic assemblage recovered from excavations at Structure 157A during the summer of 2005. This data is summarized in Table 4.8. The assemblage was clearly mixed chronologically. About 50% of

Group/Ware	Date	Frequency (n)	Total Weight (g)	Proportion by Weight
Achiotes/Quintal	LPC/EC	241	1971.1	8.7%
Paso Caballo Waxy	LPC	316	4080.6	18.1%
Peten Gloss: various Early Classic	EC	46	1093.7	4.9%
Cambio	LC/TC	442	7750.6	34.4%
Tinaja	LC/TC	146	2242.5	9.9%
Saxche Palmar	LC	71	1387.2	6.1%
Eroded	n/a	347	4038.5	17.9%
		1609	22564.2	100%

**Table 4.8: Primary Analysis Results of Structure 157A Assemblage
(SB-22A-1, -2, -3, -4)**

the sherds recovered were Late Classic and 26% were Late Preclassic. The rest of the assemblage was comprised mostly of eroded sherds and a small proportion of Early Classic wares. The ceramic assemblage clearly indicates that the final phase of Structure 157A is Late to Terminal Classic. Much like the other contexts discussed above, the significant presence of Saxche Palmar and the absence of fine past wares suggest that the date for the occupation of the house group is likely A.D. 600-800. Unfortunately, the polychromes in the assemblage are very eroded, making it difficult to further refine a date within the Late Classic (**Fig. 4.12**).

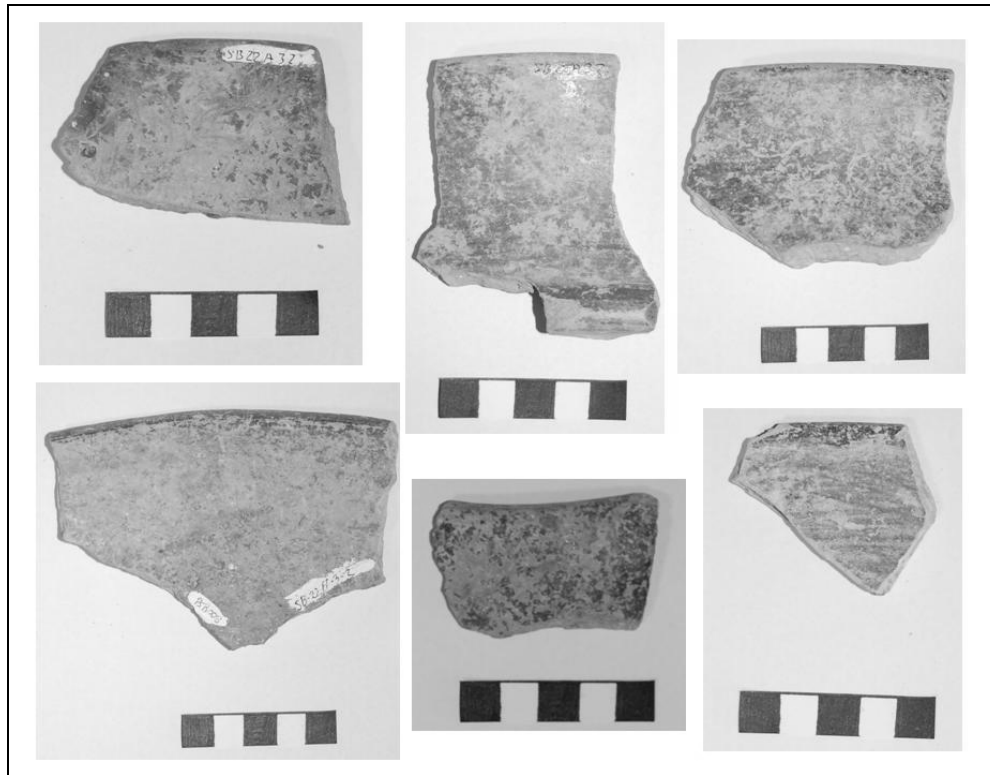


Fig. 4.12: Eroded Polychrome Rim Sherds from Structure 157A

The high proportion of Late Preclassic sherds at Structure 157A could be explained as a result of the reuse of fragmentary vessels as building fill. Given that the building was badly destroyed upon excavation (see Chapter III), the building collapse likely resulted in the presence of these early sherds on the surface. However, the possibility that the Late Preclassic sherds represent an earlier phase at this location cannot be ruled out. Only through future excavation will we be able to address this issue.

Discussion of Primary Analyses

A comparison of the Late Classic sherds from these varying assemblages provides some interesting insight into the nature of Late Classic activity at each of

these structures. Table 4.9 presents the proportions of Late Classic sherds site wide and from the archaeological contexts discussed thus far. The site wide percentages were calculated by Patricia Castillo (2007: 103) and represent a comprehensive figure for the ceramics recovered from the 2002-2007 field seasons at San Bartolo. The percentages, my own as well as Castillo's, were calculated based on weight and not frequency.

Group	Site wide (n=n/a)	Las Pinturas Façade (n=1281)	Str. 63 (n=5514)	Las Ventanas (n=20)	Str. 4 (n=73)	Str. 157A (n=659)
Saxche Palmar	18%	53%	7%	0%	15%	12%
Tinaja	35%	23%	37%	40%	29%	20%
Peten Gloss: various Late Classic	7%	1%	3%	0%	0%	0%
Cambio	40%	23%	53%	60%	56%	68%
	100%	100%	100%	100%	100%	100%

Table 4.9: Proportions of Late Classic Ceramics

The Late Classic assemblage from Structure 157A typifies what could be expected at a non-elite residential structure. The sherds are dominated by utilitarian Cambio Group sherds, Tinaja Group sherds comprise about 20% of the assemblage, and only a small portion of the ceramics recovered were Saxche-Palmar polychromes. At Las Pinturas, the assemblage is dominated by Saxche-Palmar sherds and contains equal amounts of Tinaja and Cambio sherds. At Structure 63, Cambio and Tinaja Group sherds make up the vast majority of the assemblage, and relatively few Saxche-Palmar sherds were recovered. There is a somewhat different pattern among the Late Classic ceramics site wide. Relative to the other contexts, the proportions are a bit less extreme. While Cambio and Tinaja sherds dominate the site wide

assemblage, no one ceramic group makes up more than 50% of the entire collection, something that cannot be said for any of the other contexts. However, given that the site wide assemblage represents non-elite and elite residences, as well as ritual contexts, it stands to reason that the proportions of types would be equalized to some degree by this mixing.

The most striking aspect of Table 4.9 is the distribution of Saxche-Palmar groups across the five assemblages. The proportion of Saxche Palmar sherds at Las Pinturas is considerably higher than at any of the other contexts. While we might expect very low numbers of these fine wares in non-elite domestic contexts, the proportion is actually lower within the Structure 63 assemblage, a non-residential religious context, than at Structure 157A. Furthermore, Saxche Palmar Group sherds were completely absent from the Las Ventanas assemblage, despite the fairly overt similarities between the archaeological contexts in which the deposits along the two pyramid facades were recovered (Chapter III). This suggests that the distribution of the Saxche-Palmar Group cannot be interpreted solely on the basis of domestic vs. ritual contexts. The exceedingly high proportion of polychromes that were recovered from the face of Las Pinturas indicate that the ritual nature of the building was distinct from Structure 63 and Las Ventanas. The low proportion of Saxche Palmar Group sherds that were found on Structure 4, particularly considering its proximity to Las Pinturas, supports the notion that the pyramid was a distinct offering site.

The fairly dramatic contrast between the Las Pinturas and Structure 63 assemblages (the two ritual contexts with large sample sizes) is also compelling. The

Structure 63 deposit is clearly more utilitarian in nature in that 53% of the ceramics are in the Cambio Group. This clearly distinguishes these two ceremonial locales from one another. That there is such variation between the two ceramic assemblages suggests that distinct behaviors, intentions, and perhaps participants were associated the ceremonial deposition of pottery at each locale.

Refitting

Refitting experiments were conducted on the ceramic assemblages from Structure 63 and Las Pinturas. While the experiments were generally unsuccessful in terms of reconstructing vessels or partial vessels, the inability of myself and others to find cross-fits among the assemblages is somewhat telling of the behaviors that resulted in their deposition.

Refitting experiments were conducted on part of the Structure 63 ceramic assemblage in 2003 as part of site wide conservation efforts by Rae Beaubien of the Smithsonian's Museum Conservation Institute. Beaubien looked for cross-fits after the primary analysis was complete by looking for joins by type. Due to the size of the assemblage as whole, the work was limited to the two levels that yielded the greatest number of sherds: SB-3B-2-6 and SB-3B-2-7 (see Chapter III). I assisted in selecting these particular levels because they represent the epicenter of the offering itself. The number of joins found during these efforts was surprisingly low. Of the over 1600 sherds that were recovered in these two levels, only about 20 joins were found. The

cross-fits usually involved just two or three sherds, and no partial vessels or whole vessels were reconstructed during this process.

In 2005, I conducted a small refitting experiment on the 65 polychrome rim sherds from Las Pinturas. I limited the focus to only the Saxche-Palmar sherds because this group was so prominently represented in the assemblage and because the variation in decoration facilitates finding joins. I limited the experiment to rim sherds due to issues of time and lab space. I first looked for refits within individual units. This was a fairly quick process as most units contained between 5-20 rim sherds. I then expanded the search to adjacent units and finally looked across all the units on that corner. Lastly, I looked for joins between the two pyramid corners. I was unable to find a single cross-fit during this process.

The refitting experiments conducted on both the Structure 63 and Las Pinturas ceramic assemblages indicate one of two things: 1) the archaeological contexts underwent severe post-depositional disturbance resulting in breaking and then relocating of the vessels; 2) the ceramics were not broken *in situ* and were in fact placed at these locales in a fragmentary state. In regards to the former, it seems unlikely that either of these contexts was disturbed to the degree that would have resulted in such a redistribution of the sherds. The Structure 63 deposit was enclosed and somewhat protected in the building. Several of the building walls were still intact and the fact that the offerings were still clearly clustered in the front of the monument suggests that water, wind, or other forces did not considerably disturb the structure contents. In regards to Las Pinturas, while the sherds were placed on the surface,

there is strong palynological evidence to suggest that the ceramics and ash were covered over in some fashion after deposition. This will be explored further in Chapter V. Furthermore, while the pottery in the Las Pinturas deposit undoubtedly shifted over time, the fact that not one join was found across the building façade suggests that post-depositional processes cannot adequately explain my inability to find cross-fits in the assemblage.

This suggests that the vessels were not placed in the deposits whole nor were they smashed in some kind of theatrical display and left *in situ*. Given that the localization of the deposits at Structure 63 and Las Pinturas indicate that they are ritual in nature, the fragmentary state of the pottery was perhaps quite intentional on the part of Maya. What the sherds represent is only the final moment in what could have been a very long and complex ceremonial process. The ritual nature of these deposits and the specific behaviors that resulted in their formation will be explored in much greater detail by examining multiple lines of evidence in the chapters to come.

Conclusions

The ceramic data from the excavations discussed above provides many levels of insight into the archaeological contexts from which they were recovered. Perhaps the most important information that is derived from the pottery is a dating of each of the features. At Structure 63, the sherds suggest that most of the activity at the shrine occurred within the relatively narrow date range of A.D. 650-800. This date is considerably narrower than that which is indicated by the two radiocarbon dates (see

Chapter III). At Las Pinturas, Las Ventanas, Structure 63, and Structure 157A, the presence of the Saxche-Palmar Group and the absence of fine paste wares provide a date of about A.D. 600-800. This places the activity firmly within the Late Classic, and rules out the possibility for much Terminal Classic activity at these locales.

Beyond the important chronological contributions that the ceramics provide, a cross-context comparison of the assemblages also illustrates clear distinctions between the pottery assemblages present in each context. Most notably, the distribution of polychrome types is highly variable across the site. In fact, the majority of the Late Classic pottery recovered from the Las Pinturas façade were Saxche-Palmar sherds. This discrepancy prompted me to conduct Instrumental Neutron Activation Analysis (INAA), a highly precise sourcing technique on the sample of polychromes from four different contexts across the site: Las Pinturas, Structure 63, Las Plumas, and Structure 157A. The results of the analysis are forthcoming (and not available for this work), but the immediate goal of the analysis is to examine potential variation among the polychrome pottery at San Bartolo. With the results, I hope to address these questions:

- Is there a distinction at the chemical level between Saxche Palmar sherds that are found in residential (Las Plumas and Structure 157A) and ceremonial (Structure 63 and Las Pinturas) contexts?
- Does the Las Pinturas assemblage show greater variation than the other three contexts?

If Las Pinturas sherds do show more variability, this could indicate that pilgrims from other sites were making some or all of the offerings. Pilgrimage activity would also help to explain the abundance of polychromes at this structure relative to other contexts across the site. The next level of the analysis would clearly be to try and establish where the sherds were coming from by comparing their chemical signatures with those of polychrome vessels from other sites in the region.

The ceramic assemblages also provide some indicators for distinct behaviors related to ritual behavior. At Structure 63, many of the sherds were clearly burned and drilled holes, suggesting ritual behavior or reuse, were present on some specimens. Refitting efforts at Structure 63 and Las Pinturas suggest that the Maya did not break the vessels *in situ*, and may have intentionally scattered them. Feasting is another specific type of behavior that can sometimes be derived from pottery. Vessel form, size, and function are particularly useful for trying to address this issue (e.g. – Blitz 1993; Clark and Blake 2000; Fox 1996; Lesure 1999). Given that the activity at Structure 63 and Las Pinturas is ritual in nature (also see subsequent chapters), the presence of an abundance of large serving vessels would be a strong indicator that pottery used in feasting events was deposited at these two structures. Unfortunately, I cannot address this issue with the data that I have at this time. The absence of these data is partially related to the way that primary analysis is done on the San Bartolo Project. Vessel form is recorded as either “open” or “closed.” Therefore while closed forms are limited to jars, open forms can be plates, bowls, cups, cylinder vessels, or drums. Indeed, it is sometimes not possible to distinguish

among these forms. However, certain parts of these vessels are very diagnostic. For example, flat-bottomed bases are a good indicator for plates. The straight walls and curvature of cylinder vase sherds can also be very distinctive. Future work with the Structure 63 and Las Pinturas assemblages will entail a more detailed recording of vessel form and an estimation of rim diameters when possible. While this level of analysis is not necessary for all excavations at San Bartolo, which is why it is not part of the project's research design, it will be high useful to further address some of the unique ritual deposits that I have recovered at the site.

Chapter V

Paleoethnobotanical Finds

While the last several decades of paleoethnobotanical research has produced a number of significant works that have helped to resolve questions of ancient economy, early agriculture, and environment, ritual behavior, with few exceptions, is a topic that remains decidedly under addressed within the discipline. For example, Hastorf's (1993) very thorough review of paleoethnobotanical research is broken down by topic: "Origins of Agriculture," "Environmental Use, Reconstruction, and Change," "Economic and Political Issues." Other concepts like religion, ritual behavior, and ideology, which are so prevalent in other areas of archaeological research, are conspicuously absent in this review. This is not to say that her synthesis is lacking, but rather that the work had yet to be done.

Despite this apparent hole in paleoethnobotanical studies, there are only a handful of studies to date that explicitly address issues related to the performance of religious rites. Newman *et al.* (2007) successfully compared the pollen record to charcoal collected from an Iron Age ritual deposit at the site of Raffin Fort, Ireland, to address the purposeful selection and avoidance of certain tree species based on religious ideology. Several Old World studies have linked the presence pollen from flowering plants in burial contexts to the intentional placement of the flowers (e.g. - Lageras 1999; Leroi-Gourhan 1975; Tipping 1994). Ceremonial behavior has been

addressed with somewhat more limited among New World paleoethnobotanists. Several studies have yielded evidence for macrobotanical remains (seeds, stems and other parts of the plant that are visible to the naked eye) that were used in ritual behavior, particularly in cave sites where preservation is fairly good (e.g. – Brady 1989; Morehart 2005). However, any discussion of microbotanical (pollen and phytolith) evidence for ceremonial activity is decidedly lacking in the New World literature. The sole exception is the work done by Steve Bozarth (Bozarth and Guderjan 2004) at the site of Blue Creek, Belize, in which he used phytolith analysis to identify ritually offered sponge spicules and a number of cultigens from a series of soil samples that were taken from ritually cached vessels recovered across the site.

After reading Bozarth and Guderjan's article while in the field at San Bartolo, I decided to collect soil samples from what were apparent ritual deposits to have pollen and phytolith analysis conducted on them. The San Bartolo paleoethnobotanical study illustrates the potential of phytolith and pollen data to enrich our understanding of ritual behavior, as the plant remains I have recovered from the ash deposits across the site are pivotal to the reconstruction of a series of specific ceremonies that the community was performing during the Late Classic period. These data sets, particularly the phytolith data, provide new insights into ancient Maya ritual behavior and suggest models for how similar methodologies can be applied to the investigation of ceremonial practice in general.

Phytoliths

Phytoliths, meaning “plant stones” from Greek, are microscopic silica bodies formed in plant cells. They occur as a result of silica absorption from the ground water into the roots of the plant. This silica then spreads up through the other structures of the plant and becomes deposited in the organism’s cells and the intercellular areas (Pearsall 1989; Piperno 2006). When the plant dies, while the cells themselves decay, the silica bodies often remain in archaeological deposits.

A number of factors affect the formation of phytoliths, each of which should be considered when applied to specific questions about past environments and human behavior. The plant’s biological makeup creates by far the most significant distinctions from one plant to another. While water and thereby silica are transported throughout the plant via the xylem, the silica does not necessarily get deposited in all the parts of the plant. Some plants will only produce phytoliths in the above ground structures and others in only the roots and tubers. Many plants will form phytoliths in both regions. Furthermore, some plants exhibit high rates of phytolith production, others fairly moderate, and some plants don’t produce phytoliths at all (see Piperno 2006, Table 1.1). In addition, the overall climate, the type of soil, the age of the plant, and the water content in the soil can all create some degree of variability in phytolith formation across taxa. However, as Piperno (2006) has illustrated very thoroughly in her discussion of these variables, while they do affect the rates of phytolith production, they do so only in plants that are high producers to begin with.

Therefore, for the sake of archaeology, these factors will not have a profound affect on paleoetnobotanical findings.

Phytoliths are not only indicators of a plant's unique cellular makeup, but because they are inorganic, they exhibit remarkable preservation relative to the plant itself. Phytolith data is particularly useful in archaeology not only because of preservation, but because, unlike pollen, the phytolith is direct evidence for the plant itself in a specific context. Furthermore, different parts of the plant will form distinctive phytoliths, providing another level of detail to aid in the addressing of specific questions about the relationship between humans and plants in the past.

Phytolith Research: A Brief History

While phytoliths were first recognized during the mid 19th century, the development of phytolith studies in archaeology was a relatively slow process. Early German scientists like Netolitzky (1914, as cited in Piperno 2006) and Schellenberg (1908, as cited in Piperno 2006), who were the first to apply phytoliths to the archaeological record, identified significant Old World cultigens like wheat and barley in ancient soils from Turkey and Europe. However, it was not until the mid-20th century that phytolith research took hold outside of Europe. During this time, researchers made major headway in establishing the phytolith morphology of North American trees and the body of knowledge on grasses was expanded considerably (Piperno 2006).

The 1980s and 90s marked the burgeoning of the widespread application of phytolith data to the archaeological record as direct evidence of plant use in the past. Over the course of this time period, phytolith data increasingly became a major line of evidence in archaeological investigations that was used to address specific questions about ancient behavior. This was an especially critical phase of phytolith research in the tropics of Central America, a region where the preservation of other types of plant remains is generally poor. Deborah Pearsall and Dolores Piperno made a whole host of significant contributions to phytolith studies during this time period, particularly in regards to the maize debate (Pearsall 1987; Pearsall and Piperno 1990; Piperno 1984; Piperno and Pearsall 1993), and investigations into subsistence practices in Ecuador and Panama (Pearsall 1988; Pearsall and Piperno 1990; Piperno 1983). Steven Bozarth identified a number of new phytoliths and phytolith types during this period, including *Phaseolus* (bean) (1990) and *Cucurbita* (squash) rind (1987).

Since the turn of the new millennium, this trajectory of additional identifications has certainly been maintained, as increasingly more complex issues are addressed with phytolith data. For example, Steve Bozarth identified algal statospores (indicating golden algae) in several soil samples from the Maya site of Nakbé, which suggests that the ancient Maya were importing fertile “muck” from nearby marshes (specifically, *civales*) to their agricultural fields (Hansen *et al.* 2002). This helps explain how the Maya were able to sustain a high level of agricultural production in the northern Peten, an environment that was and continues to be a

rather harsh place for human habitation. As research expands and continues, so, too does the phytolith database. In fact, Deborah Pearsall's project "Phytoliths in the Flora of Ecuador," and its associated website (Pearsall 2008) has made considerable contributions to New World paleoethnobotany. In a recent related study, Chandler-Ezell *et al.* (2006) identified root and tuber phytoliths from a number of edible plants (manioc, arrowroot, and *Calathea*) at the site of Real Alto, Ecuador. This was an especially significant find because the presence of the starchy part of the plant provides good evidence for its role in ancient diets. However, to reiterate, the main thrust of archaeological phytolith research to date has been on the identification of cultigens and the role of agriculture, not on religious practices.

Pollen

Pollen is produced in flowering plants and carried across a given region by a variety of forces. It is then redistributed on land and in water and will preserve archaeologically in oxygen-free or desiccated environments. Plant pollen is preserved in the form of the exine, or outer wall of the pollen grain (Pearsall 1989). The exine is composed of sporopollenin, which is fairly durable, again, under certain conditions (Pearsall 1989). The general shape and size of pollen grains, which can range from 5-200 microns in size, are very useful for identifying taxa (Pearsall 1989). Pollen aperture and pollen sculpturing can also be extremely helpful in characterizing specific pollen to the genus or species level (**Fig. 5.1**). Pollen apertures represent the actual structure of the pollen wall and manifest themselves in

distinctive pores and furrows that can be seen on the surface. Pollen sculpturing represents external features on the pollen grain wall and include small spine-, pit-, and net-like elements (Simpson 2006).

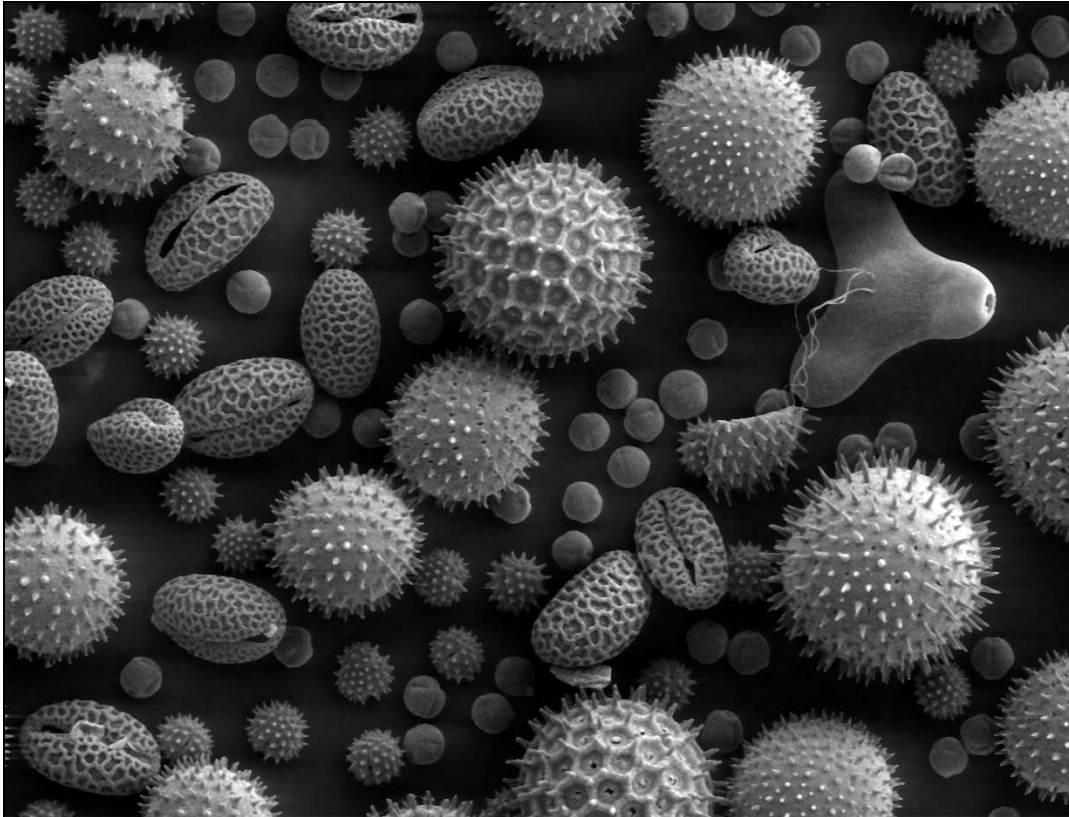


Fig. 5.1: SEM Image of Pollen Grains of Sunflower, Morning Glory, Hollyhock, Primrose, Castor Bean, and Oriental Lily. (Image retrieved from: <http://svs.gsfc.nasa.gov/vis/a010000/a010300/a010394/>)

The application of pollen analysis to the archaeological record can be a dicey affair. First of all, the method by which pollen is released and the correlating quantity of pollen a species produces vary greatly across species. Pollen may be dispersed by wind, animals, and water, or a plant may be self-pollinated (Pearsall 1989).

Moreover, while some taxa produce abundant pollen, others produce very little. As such, these natural processes as well as the circumstances of preservation profoundly

affect the amount of pollen that is recovered archaeologically and thus should be considered before interpreting the data. The calculated pollen percentage is not necessarily a representation of that particular plant's actual presence in the ancient past (Leyden 2002). For example, many fruit-producing tropical trees are insect-pollinated, and thus are not a significant presence in the "pollen rain" that contributes most significantly to ancient pollen deposits.

Of course, as with all archaeological materials, post-depositional processes like soil acidity, animal activity, and erosion will affect the preservation of pollen. Generally speaking, good pollen preservation occurs in fairly anaerobic or desiccated environments (Pearsall 1989; Leyden 2002). One final consideration in regards to the weaknesses of pollen data in archaeology is the inherent mobility of pollen itself. Pollen recovered from a given context does not indicate the presence of that particular plant, but rather that the plant was growing in the environment. For this reason, pollen can rarely be used to address specific actions or events in the past. Rather, pollen data is often most useful for asking larger questions about environmental change and stasis, domestication, and economy.

Pollen Research: A Brief History

Palynology has a somewhat longer history than phytolith studies, particularly in regards to its application to the field of archaeology. While some work with ancient pollen was done during the 19th century, Lennart von Post's 1916 pivotal study was the first that used pollen percentages (Pearsall 1989), which has become

the standard in the reporting of palynological data. Archaeologists took notice, and it wasn't long before they began to use pollen to look at how humans affected ancient environments (e.g. – Iversen 1949).

In the Old World, pollen studies really took a foothold in archaeology during the 1950's and 1960's, with work by Dimbleby (1954, 1957, 1961), among others. Early studies in the New World tended to be focused in the American Southwest, with work by scholars like Sears (1937, 1952), Martin (1963), and Schoenwetter (1962). Palynological work expanded out from the Southwest into other research areas in the United States during the 1970's (e.g. – Bryant 1974; King *et al.* 1975,1977).

The timing of palynological work across much of Latin America followed a similar trajectory, with early work beginning in the 1960s by investigators like van der Hammen (e.g. - 1963, 1966), Cowgill *et al.* (1966), Bartlett and Barghoorn (1973). In Maya studies, pollen studies have contributed significantly to discussions about the domestication of maize (e.g. – Pohl *et al.* 1996; Rue 1988). Barbara Leyden has done extensive work with pollen in the Maya area, particularly in regards to environmental change and the role of humans in facilitating this change (e.g. – Leyden 1987; Leyden *et al.* 1996; Leyden *et al.* 1998). Other collaborative projects have looked at pollen evidence in conjunction with soil chemistry to address ancient agricultural practices and environmental change in the region (e.g. – Dunning *et al.* 1997; Dunning *et al.* 1998; Hansen *et al.* 2002). Due to the nature of pollen, in that it

tends to travel, palynological research has and continues to be focused on looking at broader questions related to environment and agriculture.

Paleoethnobotanical Studies at San Bartolo

Excavations at San Bartolo are helping to pioneer a new application of paleoethnobotanical studies to the archaeological record of the ancient Maya. A number of phytolith and pollen studies conducted over the last two decades have made important contributions to the investigation of ancient Maya environment, economy and agricultural practices, (for example, Dunning *et al.* 1998; Hansen *et al.* 2002; Leyden 2002; Pohl *et al.* 1996), but rarely have phytolith or pollen studies been applied to address ritual behavior in the Maya past.

Based on the clear localization of the ash and ceramic deposits on the façade of Las Pinturas, the features were interpreted in the field as a kind of offering. In order to test this hypothesis, in January of 2008 Dr. Steven Bozarth of the University of Kansas Palynology Laboratory conducted a pilot phytolith analysis on samples of ash from both the southwest and the northwest corners of the pyramid. The results, which were both unexpected and compelling, prompted further testing. This entailed pollen analysis on the same samples, and phytolith analysis on ash collected from two other contexts at the site: Las Ventanas and the Palace Tigrillo. The results of this study are discussed in some detail below.

Phytolith Analysis at San Bartolo

Methodology

The phytolith analysis was conducted by Dr. Steve Bozarth at the University of Kansas Palynology Laboratory. A five gram sample was collected from each of the six samples (three from Las Pinturas, two from Las Ventanas, and one from the Palace Tigrillo) that were collected from potential ritual deposits across the site. The separation of phytoliths occurred in the following stages (Bozarth 2008):

- 1) removal of carbonates with dilute hydrochloric acid;
- 2) removal of colloidal organics, clays, and very fine silts by deflocculation with sodium pyrophosphate, centrifugation, and decantation through 7-micron filter;
- 3) oxidation of sample to remove organics;
- 4) introduction of spike spores for calculation of phytolith concentration;
- 5) heavy-liquid flotations of phytoliths from the heavier clastic mineral fraction using zinc bromide concentrated to specific gravities of 2.4;
- 6) washing and dehydration of phytoliths with butanol; and
- 7) dry storage in 1-dram vials.

Part of the phytolith isolate was then sealed in cover glass and examined with a Zeiss microscope at a magnification of 625X. Phytoliths were identified based on Piperno's classification (1988, 2006) and by comparison with the University of Kansas phytolith reference collection of Central American flora (Bozarth 2008).

Phytolith counts were obtained in the following manner: "microfossil concentration = number of microfossils counted x (total number of exotics added/number of exotics counted) divided by weight of sample" (Bozarth 2008).

Phytolith Analysis Results

The phytolith analysis conducted from the six ash samples from across San Bartolo establishes both continuity and variability between the contexts (**Table 5.1**). A total of 31 different phytoliths were identified across the six samples. In addition, diatoms and algal statospores were identified in every sample, and sponge spicules in one sample. For the remainder of this discussion the phytolith and pollen samples will be addressed as follows:

Pinturas 1: SB-1C-20-4 (ash widespread, association with the southwest corner)

Pinturas 2: SB-1C-22-4 (ash localized, in association with southwest corner)

Pinturas 3: SB-1C-14-2 (ash widespread, in association with northwest corner)

Ventanas 1: SB-7A-14-2 (ash localized, in association with southwest corner)

Ventanas 2: SB-7A-15-2 (ash localized, in association with southeast corner)

Palace 1: SB-8D-3-2 (ash localized, in association with corner along southeast facade)

For a more thorough description of each of these contexts, please consult Chapter 3.

Sample name	PINTURAS 1	PINTURAS 2	PINTURAS 3	VENTANAS 1	VENTANAS 2	PALACE 1
Sample number	SB-1C-20-4	SB-1C-22-4	SB-1C-14-2	SB-7A-14-2	SB-7A-15-2	SB-8D-33-2
Phytolith Sum	205	252	265	226	213	210
Biosilicate Concentration	3,071,085	2,410,544	6,484,364	925,433	356,794	1,357,798
Phytolith Concentration	2,005,008	1,573,763	5,090,226	839,952	263,879	1,040,648
Shrubs and Trees						
Rugulose spheres $\leq 10\mu$	1.3	2.8	1.5	4	4.5	4
Smooth spheres $\leq 10\mu$	-	-	-	0.4	0.3	-
Polyhedra	32.1 {1}	12.1	30.4	1.6	3.1	2.2
Polyhedra with "shell" inclusion	1.3	-	-	0.4	-	-
Anticlinal	0.3	0.3 {1}	0.9	-	-	-
Branching spirally-thickened tracheids	1.9 {2}	0.3	1.2	0.4	-	0.4
Dicot stomata	1.6	0.6	1.5	0.4	-	-
Mesophyll	5.4	27.6 {2}	5.1	37.3	9.7	40.5
Non-segmented hair	1.6 {1}	0.8	-	-	0.3	0.4
Disks - <i>Inga</i> fruit pod	1.6 (8)	0.6 (12)	(4)	1.2 (9)	1.7 (7)	0.4 (3)
Sclerid - <i>Manilkara zapota</i> leaves	(1)	-	(1)	-	.3	-
Hat-shaped palm (<i>Bactris</i> -type)	-	-	-	-	.3 {1}	-
Other palms (Spinulose spheres $\geq 10\mu$)	-	-	-	-	(3) {1}	0.4
Other palms and Bromeliads	.6	3.7	1.5	3.2	2.4	1.8
(Spinulose spheres 5-10 μ)						
Native Grasses, Subfamilies (short cells)						
Panicoid (Bilobates and crosses)	2.5	2.8	8.9 {1}	3.2	4.2	2.6
Chloridoid (Saddles and spools)	9.2	7 {1}	13.6 {1}	24.1	27.1	13.9 {1}
Pooid (Trapezoids)	0.6	-	0.3	0.4	-	0.7
Arundinoid	0.6	0.6	0.9	0.4	0.3	0.4
Native Grasses, other phytoliths						
Long cells	2.9	8.7	10.7 {1}	5.2 {1}	10.4	4
"Long cells" w/ triangular cross section	0.3	0.3 (1)	-	0.4 (2)	-	(2)
Bulliforms	0.3	0.8	0.9	5.2	2.4	2.2
Trichomes	0.6	1.1	0.3	2	4.2	0.7
Dendriforms	-	-	0.3	-	-	-
Tracheids	-	-	0.3	0.4	0.7	0.7 {1}
Non-grass herbs						
Rugulose spheres $> 10\mu$	-	0.3	0.3	-	-	-
Cyperaceae	-	0.3	-	-	-	-
Unidentified phytoliths	0.6	0.3	-	0.4	1.7	1.5
Cultigens						
<i>Calathea</i> (flat domed rhizome cylinder)	(2)	-	-	(2)	(3)	(1)
<i>Calathea</i> (rhizome spindle)	(1)	-	-	-	-	-
<i>Cucurbita</i> (squash)	(2)	(2) {1}	(1) {1}	-	-	-
<i>Phaseolus</i> (beans)	-	(1) {1}	-	-	-	-
<i>Zea mays</i>	-	-	-	(1)	-	-
Other biosilicates						
Diatoms	17.2	10.1	10.3	5.6	9.4	11
Algal statospores	17.5	18.9	11.2	2.8	16.7	11.3
Sponge spicules	-	-	-	0.8	-	1.1
Number of charcoal flecks 10 μ - 80 μ						
	38	18	32	46	598	9
Number of charcoal flecks $> 80 \mu$						
	1	-	1	4	65	-
Note: μ = microns; () = taxa identified during scanning; {charred phytoliths} (San Bartolo)						

**Table 5.1: Phytolith data from the Six San Bartolo Samples
(Adapted from: Bozarth 2008, Table 1)**

Trees and Shrubs

The leaves of local trees and shrubs are well represented in all six of the San Bartolo samples. For example, mesophyll phytoliths were identified in all six samples at San Bartolo. Mesophyll is produced between the epidermal layers of the

leaf and therefore the phytoliths are unique to this structure. These phytoliths are indicative of forest environments, but cannot be used to identify specific tree species. The relative proportions of these phytoliths across the six assemblages suggest discontinuity between contexts. The three Pinturas samples contained much higher concentrations of mesophyll phytoliths than the two Ventanas and the Palace 1 samples (**Table 5.1**). All of the samples also contained some quantity of polyhedral phytoliths, which also represent the leaves of trees and shrubs. These phytoliths are also fairly generic and not overly helpful at identifying specific plant taxa. However, they are found in much greater abundance in tree/shrubs than in grasses and thus can be used to identify forest environments (Piperno 2006). Three of the six samples (Pinturas 2, Ventanas 1, and Palace 1) had significantly higher concentrations of polyhedral phytoliths than the other three samples (**Table 5.1**). Therefore, the mesophyll and polyhedral phytolith data combined indicate that leaves were abundantly present across all three contexts.

Palms and Bromeliads were identified in all six samples. Phytoliths from these two families tend to have surfaces that are covered with tiny projections, called spinules (Piperno 2006). As such, it can be rather difficult to distinguish one family from another. However, other evidence for palms, in the form of a distinctive “hat-shaped” phytoliths, were identified in the Ventanas 2 sample.

Evidence for the leaves of *Manilkara achras*, know locally as *chicozapote*, was identified in Pinturas 1, Pinturas 3 and Ventanas 2. Phytoliths produced in the

hair cells usually found on tree leaf exteriors (Piperno 2006) were identified in the Pinturas 1, Pinturas 2, Ventanas 1, and Palace 1 samples.

Native Grasses

Grass remains were also well represented in the phytolith samples from San Bartolo. The epidermal layer of the grass leaf produces a number of different phytoliths, which are broadly divided into “short cell” and “long cell.” The short cell phytoliths are generally much more useful for making identifications below the family level (Piperno 2006).

Four grass subfamilies were identified among the six samples from San Bartolo: 1. Panicoideae, which represent tall tropical grasses; 2. Chloridoideae, or in this case short grasses that are adapted to withstand the dry season in the tropics; 3. Pooideae, or higher elevation tropical grasses and: 4. Arundinoideae, which are reed grasses (Piperno 2006). The Panicoideae subfamily are present in all six samples, but are clearly more abundant in the Pinturas 3 sample. Chloridoideae are the most well represented grass across the six samples, and are present in considerably greater numbers in the two Ventanas samples. Pooideae phytoliths were identified in Pinturas 1, Pinturas 3, Ventanas 1 and Palace 1, but in very low numbers. The Arundinoideae subfamily was identified in all six samples, but in very small quantities.

Long cell phytoliths, which again are not useful to indicate any information beyond the presence of grass itself, were also present in all six samples. Long cells in

general were relatively more abundant in the Pinturas 2, Pinturas 3 and Ventanas 2 samples. Bulliforms and trichomes, which represent other parts of the grass leaf, were present in all six samples, but in fairly small quantities (Piperno 2006). Dendriforms, which is the floral bract, or glume, was only present in the Pinturas 3 sample. Finally, tracheid phytoliths, which represent water-transporting cells in grasses, were present in very low numbers in the Pinturas 3, Ventanas 1, Ventanas 2, and Palace 1 samples.

The grass phytoliths recovered from the six samples establish that grasses were certainly present in layer. An abundance of grasses might suggest a certain degree of forest clearing had occurred in the past, but this data would be better supported by a clear increase in grass taxa over time. Unfortunately, the Las Pinturas sample did not exhibit any kind of clear stratigraphy that permitted for this kind of comparison. The data on grasses, much like the data on trees and shrubs, only offers a broad indication that perhaps, given the prevalence of both types of phytoliths, Late Classic San Bartolo can be described as a mixed environment that contained both cleared grassy areas and dense forest cover. The pollen data from San Bartolo is much more useful for addressing this issue and will be discussed in detail below.

Non-grass herbs

Non-grass herbs were identified in very low numbers and only in the Pinturas 2 and Pinturas 3 samples. According to Pearsall's (1993) work in Ecuador, rugulose spheres generally indicate the presence of plants from either the Cannaceae (*Canna*),

Heliconiaceae (*Heliconia*), or Marantaceae (which includes *Calathea*) families in the sample. They are all indicative of a fairly open and moist habitat (Pearsall 1993).

Cyperaceae was identified in low numbers in the Pinturas 2 sample. Cyperaceae, or sedge, is a family of flowering, grass-like plants found in wet, tropical environments.

Cultigens

A number of cultigens were identified from all six contexts at San Bartolo.

Calathea, *Cucurbita* (squash), *Phaseolus* (beans), and *Zea mays* (maize) were found among the six samples and show a number of interesting distributional patterns.

Calathea is a New World root crop of the Marantaceae family (**Fig. 5.2**).

Calathea seed phytoliths were first identified by Piperno (1989) and until recently it was believed that only the seed phytoliths could be used to identify the plant archaeologically (Piperno 2006). However, finds at Real Alto have demonstrated that the rhizome, an underground structure, of the *Calathea* plant produces phytoliths that are identifiable (Chandler-Ezell *et al.* 2006). While the leaves and seeds of *Calathea* also produce abundant phytoliths, phytoliths produced in the rhizome are archaeologically significant because provide direct evidence for the edible portion of the plant. At San Bartolo, *Calathea* rhizome phytoliths were identified at Pinturas 1, Ventanas 1, Ventanas 2 and Palace 1.

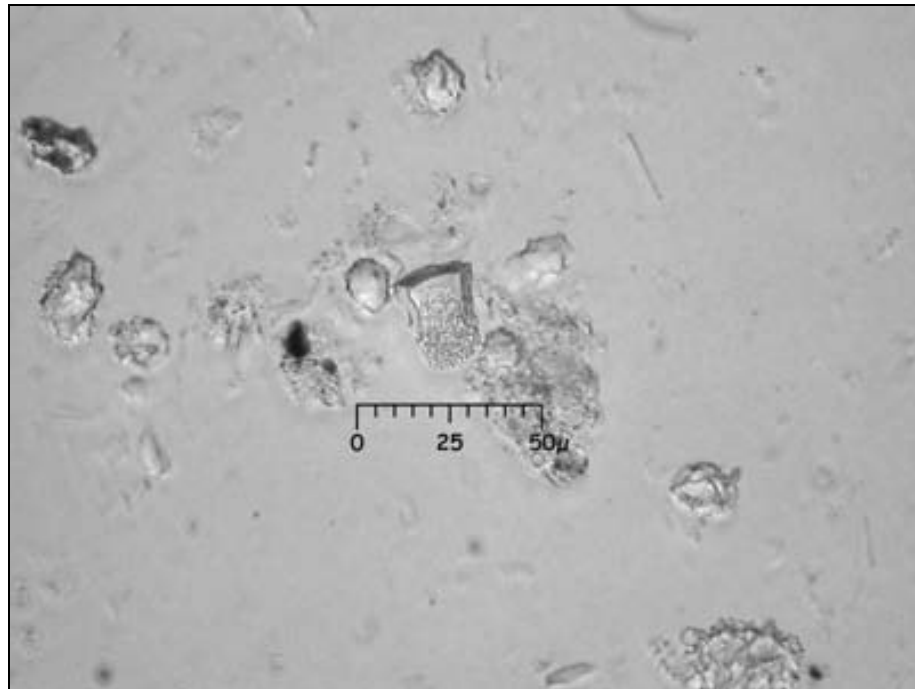


Fig. 5.2: Calathea Phytolith, Flat-domed Rhizome (Retrieved from: <http://database.coas.missouri.edu/fmi/xsl/phytos/search.xsl>)

Cucurbita, or squash, produces phytoliths in all structures of the plant, but the most informative ones are produced in the rind (Piperno 2006). In Bozarth's (1987:608) work in Nebraska and Arkansas, he first identified phytoliths of the genus *Cucurbita*, which he described as having unique "scalloped surfaces" (Fig. 5.3). Subsequent work by Piperno (1989) confirmed that tropical squash species also had this distinctive shape. At San Bartolo, *Cucurbita* phytoliths were identified at Pinturas 1, Pinturas 2 and Pinturas 3. Squash was not identified from the other three contexts.

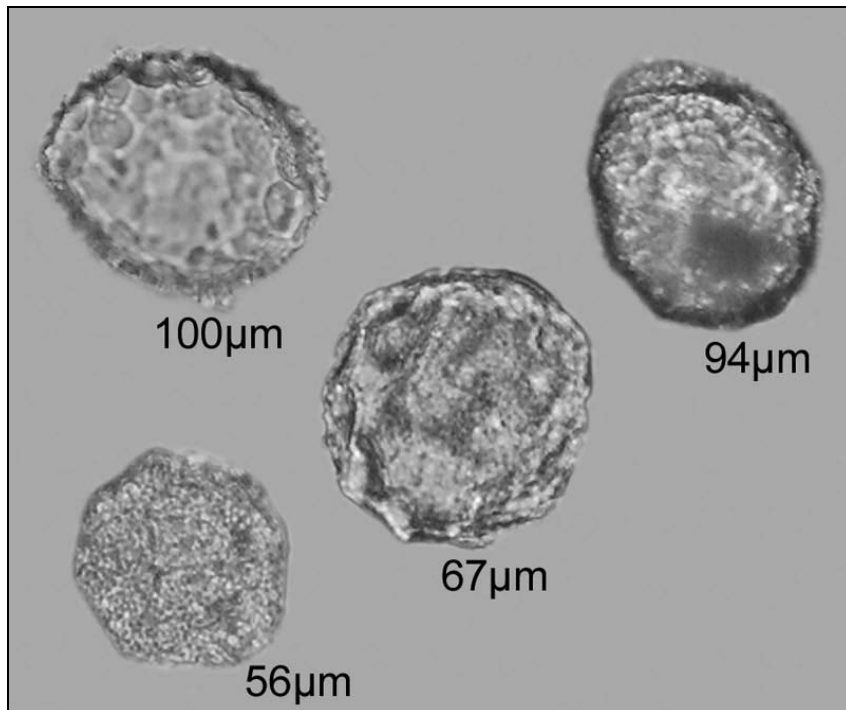


Fig. 5.3: *Cucurbita Maxima* (Retrieved from: <http://www.mnh.si.edu/highlight/phytoliths/index.html>)

The genus *Phaseolus*, or bean, has been found to produce distinctive hook-shaped hair cell phytoliths (Bozarth 1986, 1990) (**Fig. 5.4**). Bozarth (2004) has identified *Phaseolus* phytoliths at Blue Creek, Belize and Chandler-Ezell *et al.* (2006) reported finding them at Real Alto. Two bean phytoliths, one burned, were identified in the Pinturas 2 Sample.



Fig. 5.4: Phaseolus Phytolith (Retrieved from: <http://database.coas.missouri.edu/fmi/xsl/phytos/search.xsl>)

Phytolith studies have contributed significantly to the investigation of the history of maize (*Zea mays*), both in regards to its domestication and ancient use (e.g. - Pearsall and Piperno 1990; Piperno 1984;). Pearsall (1978) was the first investigator to employ maize phytoliths in order to address archaeological questions. Phytolith analyses are especially useful for studying maize because the macroscopic remains of the plant do not always preserve well, particularly if they are unburned, and both the cob and the leaves produced abundant phytoliths (the husk also produces phytoliths, but not to the same degree) (Piperno 2006) (**Fig. 5.5**). At San Bartolo, one *Zea mays* phytolith was identified in the Ventanas 2 sample. None of the other samples contained evidence for maize phytoliths.

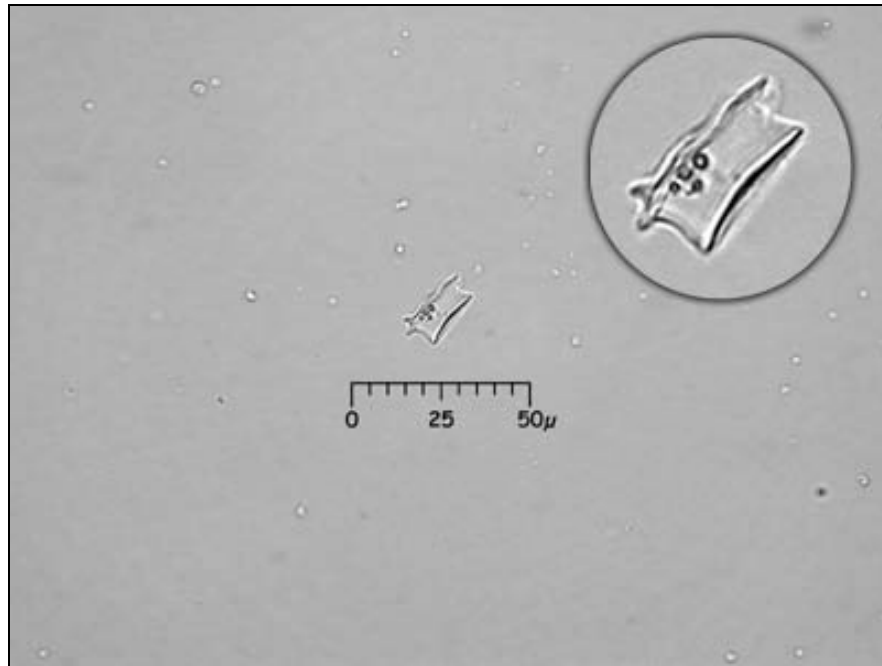


Fig. 5.5: Maize Rondel (Cob) Phytoliths (Retrieved from: <http://www.mnh.si.edu/highlight/phytoliths/index.html>)

Inga, the tree that produces the fruit commonly known as guava, has also been reported from sites like Real Alto, Ecuador (Chandler-Ezell 2006) and Cardal, Peru (Umlauf 1993). Phytoliths formed in the pod of the *Inga* fruit were identified in all six of the San Bartolo samples. The fact that the pod was identified suggests that *Inga*, like the other cultigens present in the samples (see below), was used as a food offering at San Bartolo.

Other Biosilicates

Evidence for two other types of biosilicates were identified within the San Bartolo samples: diatoms and Chrysophyceae, or golden algae. Like other plants, these two types of algae absorb silica during their life cycle that preserves after the organism's death (Piperno 2006). These silica bodies can sometimes be used to

identify specific taxa of algae. Evidence for these organisms is commonly recovered from soils that were recovered from once-waterlogged environments (Bozarth 2008). Furthermore, diatoms are indicative of ponded environments and must grow in water itself (Bozarth, personal communication 2009). Wet environments local to San Bartolo would have included *aguadas*, reservoirs, and *bajos* (low-lying swamps). Chrysophyceae, which produces unique statospores, were identified in all six samples. Diatoms were also present in every San Bartolo sample (**Fig. 5.6**).

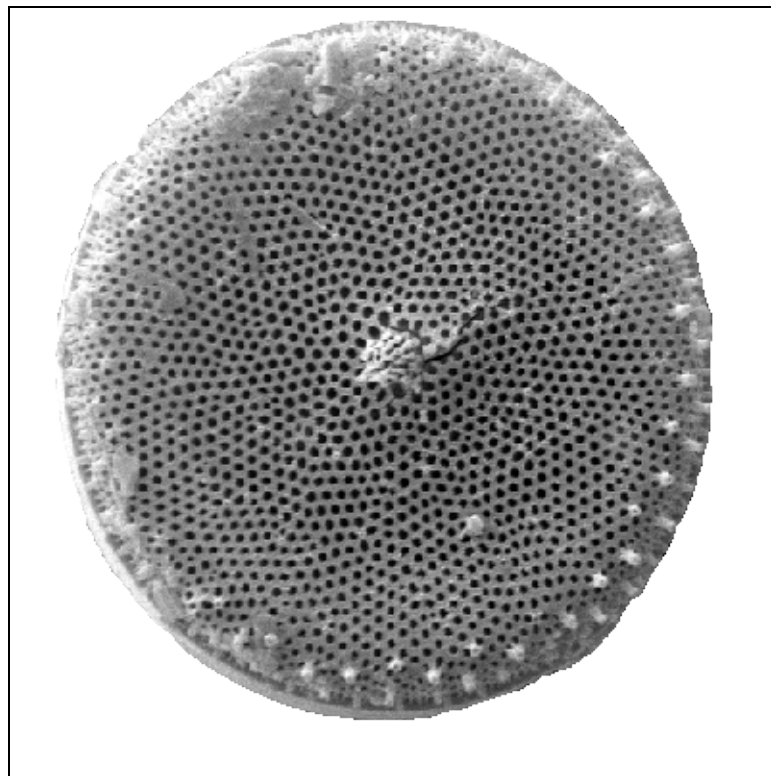


Fig. 5.6: Diatom (Retrieved from: earthsci.org on 6/23/09)

The only context that stands out among the six is Ventanas 1, as a lower proportion of both diatoms and algal statospores were identified in this sample relative to the other samples.

Evidence for sponges was also recovered among the San Bartolo samples. Sponges produce unique cylindrically-shaped spicules that become silicified (Bozarth 1993). Small quantities of sponge were identified from the Ventanas 1 and Palace 1 samples.

Charcoal

Phytolith analysis on the six San Bartolo samples recovered abundant particulate charcoal of varying sizes and quantities. Generally speaking, carbon flecks of 80µm or greater were observed with far less frequency than smaller flecks. Only two large flecks (over 80µm) were identified among the Pinturas samples (one in Pinturas 1 and one at Pinturas 3). Four large flecks were observed in the Ventanas 1 sample and 65 flecks in the Ventanas 2 sample. Flecks of charcoal that measure over 80 µm in size are generally interpreted as representative of local burning. There was an abundance of smaller carbon flecks (10µm - 80 µm) identified in all six samples (**Table 5.1**). A total of 598 small carbon flecks were identified in the Ventanas 2 sample, which is more than ten times the number identified in any of the other contexts.

Burned Phytoliths

While it is known that the melting point of phytoliths is 1000 °C (Piperno 2006), phytoliths will become scorched or charred at lower temperatures. Exactly at what temperature this occurs is unknown (Bozarth, personal communication, 2008).

The fact that only 18 of the San Bartolo specimens were burned out of the 1371 identified phytoliths in this study serves as a strong indicator that the burning events were very controlled and perhaps that the fires were burning at fairly low temperatures. The evidence that these fires were under some kind of control has some significant implications for the notion that they were a formalized facet of the ritual performances that occurred at Las Pinturas during the Late Classic.

Pollen Analysis at San Bartolo

Steve Bozarth conducted pollen analysis on the Pinturas 1 and Pinturas 3 samples in 2008 (**Table 5.2**). Given that pollen and phytolith analyses performed on the same sample often provide complimentary results, the expectation was that the addition of palynological information would greatly enrich the data set for Las Pinturas. These two data sets are often more useful in tandem because phytoliths and pollen grains often illustrate the presence of different parts of the same plant. As such, when phytoliths and pollen are studied from the same sample, the data they provide will often overlap only partially or not at all. For example, while pollen grains in the Gramineae family (grasses) tend to look very similar under the microscope, grass phytoliths show an incredible amount of variability (Pearsall 1989). Furthermore, whereas phytolith analysis can provide abundant evidence for tubers, these plants are rarely identified during pollen analysis due to issues of preservation (Roubik and Moreno 1991). However, while phytoliths can usually only be used to examine tree remains at the family level, pollen analysis has the potential to reveal far

more specific results. Palynological data can often be used to identify trees down to the genus level.

These two data sets are most useful together when they are being used to address issues of environmental reconstruction and change. Many of these studies entail the collection of stratified samples that are often from lake beds where preservation will be good. This provides a point of comparison to examine how taxa frequencies are changing over time. Again, conducting both a pollen and phytolith analysis usually provides a larger number of plant families to compare. The San Bartolo sample, however, is isolated. The ash layer was likely laid down in one event or several closely-spaced events (see Chapter 3), so taking a number of stratigraphic samples was not an option. In this case, then, the phytolith and pollen data are really providing two entirely different kinds of information. The phytoliths represent the intentional selection of plants by humans. While the pollen is suggestive of the larger environment, it must be addressed with caution as it likely represents only a snapshot in time of the flora present at San Bartolo.

Methodology

The pollen analysis was undertaken by Dr. Steve Bozarth at the University of Kansas Palynology Laboratory. A 50 gram sample was collected from two of the Las Pinturas samples (SB-1C-20-4 from the southwest corner and SB-1C-14-2 from the northwest corner). The separation of pollen occurred in the following

stages (Bozarth 2008: 11-12):

- 1) introduction of “spike” *Lycopodium* spores;
- 2) removal of carbonates with dilute hydrochloric acid;
- 3) removal of colloidal organics, clays, and very fine silts by deflocculation with sodium pyrophosphate, centrifugation, and decantation through 7-micron filter;
- 4) heavy-liquid flotation of palynomorphs from the heavier clastic mineral fraction using zinc bromide concentrated to specific gravities of 2.1;
- 5) washing and dehydration of phytoliths with butanol; and
- 6) storage in 1-dram vial with silicone fluid (1,000 centistoke).

After the sample was mixed thoroughly, some of each pollen-charcoal isolate was mounted on a microscope slide and a cover glass was placed on top. The slide was then sealed with paraffin. At least 200 pollen grains were classified during each count, a number that provides an accuracy rate of 75-85% (G. Dean, personal communication, as cited in Pearsall 1989). Taxa were identified by comparing the specimens to the reference collection at the University of Kansas Palynology Laboratory and by using Roubik and Moreno's (1991) pollen reference guide.

Sample name Sample number	PINTURAS 1 SB-1C-20-4	PINTURAS 3 SB-1C-14-2
Palynomorph Sum	462	352
Palynomorph Concentration	1,001	5,256
Pollen Sum	161	36
Pollen Concentration	398	292
Shrubs and Trees		
<i>Pinus</i> (Pinaceae)	1.1	0.8
<u><i>Chrysophyllum</i></u> (Sapotaceae)	0.2	-
<i>Combretum</i> (Combretaceae)	-	.3
<i>Malouetia guatemalensis</i> - type (Apocynaceae)	0.2	-
<i>Maytenus</i> (Celestraceae)	0.4	-
<i>Metopium</i> - type (Anacardiaceae)	0.4	(1)
<i>Myrica cerifera</i> * (Myrtaceae)	-	(1)
<i>Salix</i> (Salicaceae)	0.4	-
<u><i>Spondias mombin</i></u> (Anacardiaceae)	-	(1)
<u><i>Talisia oliviformis</i></u> (Myrtaceae)	0.2	-
Native Grasses		
Poaceae	.2 [1, 3, 3]	-
Non-grass herbs		
Low-spine Asteraceae	21.2 [19, 1.4, 5]	9.1 [2, 2.5, 3] ([1, 9, 9])
Very low-spine Asteraceae	(2 [1, 22, 22])	-
<i>Borreria</i> (Rubiaceae)	1.3 [1, 15, 15]	-
<i>Fibristylis</i> (Cyperaceae)	0.4	-
<i>Kallstroemia</i> (Zygophyllaceae)	0.2	-
<u><i>Lepidium</i></u> - type (Brassicaceae)	0.9 ([1, 2, 2])	-
<i>Polygonum</i> (Polygonaceae)	3.5 [3, 5.3, 10]	-
<i>Sida</i> * (Malvaceae)	1.1	-
Aquatics		
<i>Sagittaria</i> (Alismataceae)	0.2	-
Cultigens		
<u><i>Zea mays</i></u>	1.1 [1, 8, 8]	-
Unknown pollen		
	1.7	-
Ferns (Polypodiaceae)		
Psilate	52.8	74.4
Granulate	6.7	6
Irregular reticulate	4.3	8.8
Rugulate	1.3	0.6
Number of charcoal flecks > 10 µ < 80 µ	162	190
Number of charcoal flecks ≥ 80 µ	9	10
Note: µ = microns; () = taxa identified during scanning; [number, mean size, and largest] = aggregate data Underlined species = food producing plants; * = Ritual plant (Balick et al. 2000); (San Bartolo pollen)		

Table 5.2: Pollen Data from Two Las Pinturas Samples
(Adapted from: Bozarth 2008, Table 2)

Pollen Analysis Results

Trees and shrubs

Very low numbers of tree and shrub pollen were recovered from the two Las Pinturas samples (**Table 5.2**). Pine was identified in both the Pinturas 1 and Pinturas 3 samples, but is particularly hard to interpret as pine pollen can travel significant distances (Pearsall 1989). In a study conducted at the Maya site of Laguna Tamarandito, for example, Dunning *et al.* (1998) suggest that the pine pollen identified in the samples likely traveled over 50 km from Alta Verapaz. A number of the specimens identified produce edible fruit: *Chrysophyllum*, *Spondias mombin*, and *Talisia oliviformis* (guaya) (Bozarth 2008). The general paucity of tree pollen represented in the San Bartolo sample can be explained by the fact that many of the tree species that we would expect to have been growing in the area at this time are insect-pollinated and do not produce a lot of pollen to begin with (Dunning, personal communication 2009).

Herbaceous Plants

The Asteraceae family, a group of flowering plants that includes asters, daisies and sunflowers, is well-represented in both the Pinturas 1 and Pinturas 3 samples. This is the only herbaceous plant pollen that was identified in the Pinturas 3 sample. Dunning (personal communication 2009) has suggested that the prevalence of this plant family in the sample could be “...generally indicative of weedy vegetation in an intensively cultivated landscape.” The other plants in represented in

the Pinturas 1, which include *Borreria* and *Polygonum* are all fairly common for the tropics (Jørgensen and León-Yáñez 1999)

Cultigens

Maize was identified in the Pinturas 1 sample. This was the only cultigen pollen identified in the two analyzed samples. One specimen was a large aggregate of eight grains. Aggregates are clumps of a single type of pollen that may be interpreted to represent pollen dispersal over short distances or the actual introduction of portions of the plant represented into an archaeological setting (Cummings *et al.* 2007: 78). Given that maize pollen does not tend to travel very far to begin with, its presence in the Pinturas 1 sample suggests that it was being grown fairly locally.

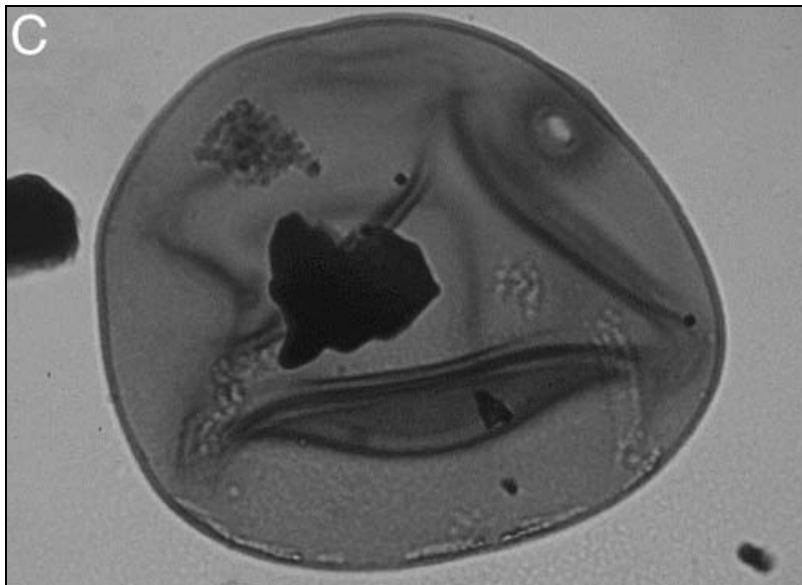


Fig. 5.7: Maize pollen.
(From Sluyter and Dominguez 2006, Fig. 3c)

Ferns

Fern spores (of the family Polypodiaceae) were identified in vast quantities in both the Pinturas 1 and Pinturas 3 samples. Fern dominates both samples (65.1% of the Pinturas 1 sample and 89.8% of the Pinturas 3 sample) (Bozarth 2008). These concentrations of spores suggest that they were deposited on the façade of the pyramid by the transfer of water to this locale, rather than as a result of wind or other dispersal forces.

Aquatic Plants

One aquatic plant, of the genus *Sagittaria*, was identified in the Pinturas 1 sample. This plant is generally found growing on the edges of bodies of water. It's highly likely that, much like the ferns, the *Sagittaria* pollen was relocated to the pyramid as part of the water itself.

Discussion of Paleoethnobotanical Data: Reconstructing Behavior at Las Pinturas

The excavations at Las Pinturas provide the best and most complete archaeological context from which to approach the meaning of this ash layer. As opposed to the Las Ventanas and Palace excavations, the ash was found in a number of adjacent units across the face of the pyramid and often occurred in thick layers that were clear in profile (see Chapter III). Furthermore, the preservation of pollen at this locale suggests that the layer was buried shortly after deposition (this will be discussed further below). For this reason, a thorough review and discussion of the

phytolith and pollen results from Las Pinturas will serve as the baseline for subsequent discussions of the plant remains from the other two contexts.

Before discussing the cultural and behavioral implications of the paleoethnobotanical remains, it is first necessary to rule out the possibility that the ash is the result of some kind of natural burning event. This scenario needs to be addressed because forest fires will also result in the deposition of large amounts of charcoal and ash. Furthermore, these events may have been relatively common in the Petén during the long dry seasons, particularly between January and April.

First of all, the layer is completely lacking in large, visible pieces of carbon, suggesting that wood was not burned during its formation. In fact, all but one of the carbon flecks in each sample measured under 80µm in size. A number of studies have correlated an abundance of macroscopic and microscopic carbon and the occurrence of ancient forest fires (Horn 1993; Rue *et al.* 2002). The relative dearth of large pieces of charcoal suggests that wood was not being burned in this fire and that it was a controlled and perhaps low temperature event.

As discussed in Chapter III, the ash deposit was highly localized. It was observed only in association with the actual corners of the structure, but not along other portions of the excavated façade (see Chapter 3). This suggests that a natural burning event does not adequately explain the ash layer. A natural burning event would be random and perhaps much more widespread than is indicated by the evidence from Las Pinturas.

The phytolith and pollen data support the hypothesis that the fire could not have been natural. For example, the golden algae and diatoms present in the ash deposit would have lived in body of water, like a pond, lake, or reservoir. Likewise, ferns would have only grown in a very wet environment near such a body of water (Bozarth, personal communication 2008). The deposit occurs at a clear angle along the architecture on the northwest corner of the pyramid, not an area where rainwater would have naturally collected. Therefore the golden algae, diatoms, and fern spores had to have been brought by human action to the pyramid from some fairly local body of water. It may have come from one of several *aguadas* peppered around the site. While there is a small reservoir located along the south side of the pyramid platform, there is no evidence that it was used during the Late Classic (Dunning, personal communication 2009). Furthermore, excavations at every structure in the Las Pinturas group suggests that Late Classic activity here was very limited (see Chapter III). As such, it is much more plausible that the water came from the San Bartolo *aguada*, which is located near Las Ventanas, and was definitely in use during the Late Classic period (Dunning n.d.). The walk from Las Ventanas to Las Pinturas takes about fifteen to twenty minutes on foot.

The presence of the *Calathea* rhizome phytolith, representing the edible portion of the plant, and the conspicuous absence of *Calathea* leaf phytoliths also suggests that the ash layer was not formed naturally. Given that *Calathea* leaf phytoliths tend to exhibit excellent preservation (Bozarth, personal communication

2008), the identification of only the rhizome suggests that the *Calathea* were not growing on the pyramid, but were brought to the pyramid face by human action.

Finally, the very fact that pollen was identified in the samples also suggests some kind of human intervention. Pollen is very fragile and subject to oxidation in most environments (Pearsall 1989; Leyden 2002). For this reason, caves and lakebeds are the most common contexts from which pollen is recovered. The front face of Las Pinturas is a far cry from either of these types of archaeological locales. Therefore, the presence of pollen in the samples taken from the pyramid façade indicates that the layer was rapidly buried (Bozarth 2008; Dunning, personal communication 2009). The preservation of pollen on both sides of the structure suggests that building collapse from above, unless it was massive and abrupt, is not an adequate explanation for the burial of the layer. As such, intentional human burial of the ash more aptly explains the preservation of the pollen. In regards to reconstructing behavior, the phytoliths are much more useful than the pollen data, but the pollen evidence from Las Pinturas does provide evidence that the ancient Maya felt compelled to cover, hide, or protect the deposit of ash and ceramics at some point shortly after they were placed there.

The Ash as a Cultural Event

That the layer was not the result of some kind of natural burning event begs the question: What kind of human behavior resulted in this unique organic deposit? A number of scenarios involving human intervention could account for the existence

of this layer: 1. agricultural activity; 2. the relocation of water from a nearby source to the pyramid; and 3. ceremonial activity.

A layer of ash might be explained by agricultural activity in that the Maya may have been employing it as a kind of fertilizer. In Amazonia, for example, vast areas of *terra preta*, or dark earth soils, containing large quantities of ash and organics have been recovered from archaeological contexts (Glaser and Woods 2004). An agricultural hypothesis would also explain the evidence that water was brought to the pyramid from elsewhere. For example, at Nakbé, Guatemala, the presence of algae phytoliths in soil samples taken from an artificial agricultural terrace was used to support the assertion that "muck" from nearby *bajos*, was being imported to the site for its fertility (Hansen *et al.* 2002). This scenario would also explain the presence of the three cultigens on the pyramid.

There are, however, a number of problems with this explanation for the presence of the ash deposit. Most significantly, the logistics of planting on the corners of a pyramid suggest that this hypothesis is not likely true. On the northwest corner of Las Pinturas, for example, the ash was deposited directly on top or very close to the building (**Fig. 3.2**). The architecture itself would have crowded the roots. Furthermore, given that the building had been abandoned for at least 400 years, the structure itself would have been deteriorating at the time that ash was laid down. As such, it seems that the front face of a crumbling pyramid would be an unwise location to plant a garden. Lastly, as mentioned above, while *Calathea* and other cultigens are present among the ash, only the edible portions of the plants are

represented in the remains. Again, if *Calathea* were being grown at this locale, then it would stand to reason that phytoliths from the entire plant would appear in the phytolith analysis. Furthermore, the rhizomes of the *Calathea* plant grow in fairly deep soil (Bozarth, personal communication 2009). It would be impossible for them to grow on whatever small amount of soil may have been on the Las Pinturas façade

Given the fact that some of the biosilicates clearly must have arrived at the face of Las Pinturas as a result of the relocation of water, it is necessary to address how *all* the phytoliths were not brought to the pyramid this way. Phytoliths, just like other biosilicates, can preserve quite well in water (Piperno 2006). However, Bozarth (2008: 13) describes the concentration of phytoliths in the ash as “extremely high.” Higher, in fact, than those he found in similar studies at the sites of Blue Creek and Nakbé. So it stands to reason that the Maya were burning *something* to create this layer of ash. The phytolith data from the three Las Pinturas samples indicates that leaves were being burned. As discussed above, there is evidence for massive amounts of leaves on the face of the pyramid and an absence of large pieces of particulate charcoal (over 80µm in size) that are indicative of burned wood. However, this does not necessarily indicate that cultigen phytoliths were *in situ* and were not relocated from the water source. That said, the fact that two *Cucurbita* phytoliths and one *Phaseolus* specimen were burned does provide a solid link to the burning that formed the ash layer. Although this is by no means unequivocal proof, this suggests that the cultigens recovered from the Las Pinturas samples did not arrive

there accidentally in water, but rather that they were brought there separately and with some other intention.

Having ruled out an agricultural or natural explanation for the presence of the ash deposit at Las Pinturas, the only remaining plausible scenario is that the layer was formed as the result of one or more burning events that were ceremonial in nature. The burning of plant material, archaeological context of the ash, the presence of water-related plants, and the identification of certain cultigens can all be explained by ritual behavior. This will be explored further in the next chapter.

The Phytolith Finds Site Wide: Continuities and Disjunctions

The discussion of the pollen and phytolith data above was limited to the three samples that were recovered from the pyramid Las Pinturas. Again, there is abundantly more data available on the ash layer from this context and therefore it serves as a baseline for the interpretation of ash site wide. That said, there is some compelling continuity between the evidence for burning among the six samples that suggests similar types of behaviors occurred at all three locales. In the Pinturas 1, Pinturas 2, Pinturas 3, Ventanas 1 and the Palace 1 samples, there were significant concentrations of polyhedra phytoliths, mesophyll phytoliths, or both. Again, the combination of abundant evidence for leaf remains combined with the paucity of large charcoal flecks found in these samples (see Table 5.3 below) suggests that leaves were the primary fuel that was used in the creation of the fire and resulting ash.

	Pinturas 1	Pinturas 2	Pinturas 3	Ventanas 1	Ventanas 2	Palace 1
Polyhedra	32.1	12.1	30.4	1.6	3.1	2.2
Mesophyll	5.4	27.6	5.1	37.3	9.7	40.5
Sm. charcoal flecks (10- 80 μm)	38	18	32	46	598	9
Lg. charcoal flecks (over 80μm)	1	0	1	4	65	0

Table 5.3: Selected Phytolith Percentages and Quantities of Charcoal

The Ventanas 2 sample is the exception to the rule in this case. Relative to the other five contexts, this sample did not contain a significantly high concentration of either polyhedra or mesophyll phytoliths. Furthermore, there was an abundance of *both* small and large charcoal flecks in the Ventanas 2 sample. This data suggest that perhaps the ash from this sample was the result of a wood-fueled fire. As such, based on the tree/shrub phytolith data, we cannot rule out that a natural event created or contributed to the ash in the Ventanas 2 sample.

There is also an interesting pattern apparent in the cultigen phytolith data from the six samples. While there is some discontinuity in the evidence for maize, beans and squash across the site, phytoliths from the edible portion of the *Calathea* plant were recovered from all three contexts. The significance of *Calathea* as a staple food in ancient Central America has only recently been addressed (Chandler-Ezell *et al.* 2006), but it certainly seems that the evidence from San Bartolo supports the notion that this may have been an essential crop for the Late Classic Maya. Another site wide continuity in the cultigen data is the presence of guava fruit pod phytoliths in all six samples.

Diatoms and algal statospores are also present in significant concentrations in all six of the San Bartolo samples. As discussed above, it should be noted that Ventanas 1 has slightly lower concentrations of these biosilicates than the other five contexts, but the difference is not significant enough that the Ventanas 1 sample could be interpreted as anomalous in this regard.

Given the evidence for the burning of massive amounts of leaves, along with the presence of cultigens, namely *Calathea* and *Inga*, and concentrations of algae identified in the samples from Las Pinturas, Las Ventanas, and the Palace Tigrillo, the plant remains do suggest some connection between the ash recovered from these three locales. Bearing in mind that Ventanas 2 could be the exception, the phytolith data from San Bartolo exhibits a unique pattern that could represent some continuity in the specific behavior that ultimately created the ash deposits on the facades of these three structures.

However, the paleoethnobotanical data presented above is only one of several lines of evidence in the investigation of the ceremonial deposits at San Bartolo. The archaeological context and ceramic finds from each context are also essential to reconstructing the events that occurred at Las Pinturas, Las Ventanas, and the Palace Tigrillo. The subsequent chapters will effectively weave these three bodies of data together in order to flush out how these ritual features are similar and how they are distinct.

Chapter VI

The San Bartolo Ritual Deposits: Context and Contents

Archaeological, ceramic and paeloethnobotanical evidence from San Bartolo suggests ritual behavior is the best explanation for the deposits of ash and ceramics at Structure 63, Las Pinturas, Las Ventanas, and the Palace. However, the finds indicate both continuity and disjunction between the features and, consequently, the larger meaning of the ceremonial events that resulted in their deposition. It seems that one prevalent notion during the Late Classic was the utilization of the Preclassic past, much like the architectural programs of this period. The data from Las Pinturas suggests that the Late Classic community chose to recognize, celebrate, and ultimately legitimate themselves by performing rituals on the abandoned pyramid. At Structure 63, this notion is clearly being perpetuated, via the making of offerings to a Preclassic potbelly. However, whereas Las Pinturas is clearly a ruin during the Late Classic, Structure 63 is an active shrine at this time. The evidence from Las Ventanas and the Palace exhibits a decidedly different pattern. The ash deposits at these two buildings along with finds from other structures across the site represent termination events. These ceremonies, which illustrate a kind of ritual “killing” of the buildings, likely mark some of the final moments of San Bartolo’s Classic period occupation.

Evidence for Ritual Behavior at Las Pinturas

In previous chapters I have discussed how the data from Las Pinturas illustrates that the deposition of the ash on the structure façade was the result of ceremonial behavior. In the field, I suspected that the ash may have been ritual in nature (Chapter III), the prevalence of Saxche Palmar polychromes in ceramic assemblage certainly is distinctive from other Late Classic contexts across the site (Chapter IV), and the paleoethnobotanical finds, particularly the phytolith data, clearly suggest that the ash was not formed naturally, nor is the product of ancient agricultural practices (Chapter V). However, while it is abundantly clear the ash layer can be described in the most generic of terms as “ritualistic,” there is still much more to be discussed about the nature of and perhaps motivation behind the events that lead up to and resulted in its deposition.

Localization

As mentioned before, the distribution of the ash layer on the façade of Las Pinturas was highly localized. The ash deposit was identified on the two front corners of Las Pinturas and in association with a Late Preclassic stela positioned at the base of the pyramid’s central staircase. While the entire façade was not excavated, my own investigations on the pyramid corners as well as those of Monica Pellecer, who excavated along the building’s centerline, exposed enough of the structure to identify the boundaries of the ash deposit (see Chapter III).

The perception of corners and building centerlines as powerful locales is evident from cache placement practices among the ancient Maya (Coe 1959; Joyce 1992; Pendergast 1998; Estrada-Belli 2006). There is clear correlation between this pattern and the Maya perception of the universe. The universe, according to the ancient Maya, existed along two planes, a horizontal and a vertical (Mathews and Garber 2004; Valdés 2004). The horizontal plane formed a square, consisting of four sides and four corners, which acted to bound the realm of humans. Along the vertical plane and at the center of the human world was the world tree, or *axis mundi*, which acted to connect the layers of the cosmos. This pervasive notion of the universe as organized in a quincunx pattern, the earliest examples of which are found in Olmec carvings (Reilly 2000), has been rendered on artwork and sculpture from sites across Mesoamerica (**Figs. 5.1-5.3**).

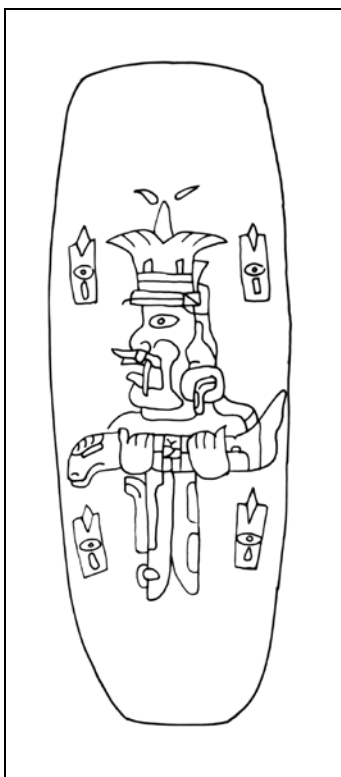


Fig. 6.1: Incised Celt with Quadripartite Pattern formed by Central Figure and Maize Plants (Retrieved from www.famsi.org on 7/2/09, Schele #4523, Adapted from Reilly 2000: Fig. 18.26)

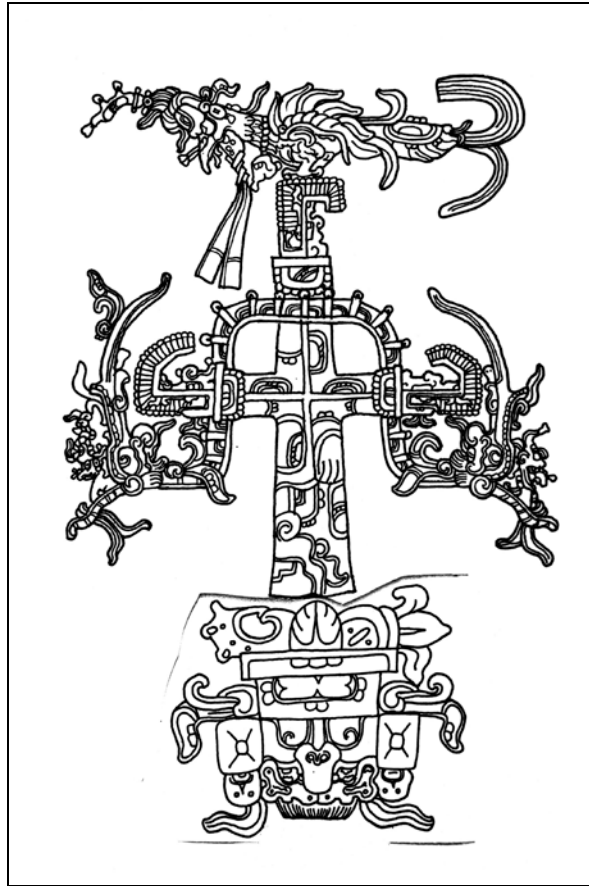


Fig. 6.2: Representation of World Tree from Sarcophagus Cover at Palenque
(Retrieved from www.famsi.org on 7/2/09, Schele #512)



**Fig. 6.3: Maize God Birth Scene from North Wall of Las Pinturas Room 1 Murals
(Drawing by Heather Hurst)**

The Maya clearly had an inclination to recreate the cosmological structure of their universe whenever possible. This notion was so inherent to the Maya that it is exhibited in their agricultural practices, construction programs, and religious performances. Yucatec farmers, for example, continue to “center” their fields, bounding them with stones in rectilinear quadrants (Freidel *et al.* 1993). Ethnographic work among the living Tzotzil (Vogt 1993) and Tzeltal (Stross 1998) Maya established that houses themselves and some rituals performed in them are intended to mimic the layout of the universe. Mathews and Garber (2004) have shown how the city of Mayapan is laid out in a quadripartite pattern, and Ashmore (1991) has made a similar assertion about the layout of Late Classic Tikal. On a

smaller scale, the Maya recreated the cosmos in caches (Bozarth and Guderjan 2004; Chase and Chase 1994; Garber *et al.* 1998) and in glyphs like the *kin* sign, which illustrates the four quadrants of horizontal space (Coggins 1980). Given this notion of sacred space, it is no surprise that the ancient Maya would have applied the concept to pyramidal structures, recognizing the corners and the center as powerful locations that required the provision of offerings.

The Stela

The presence of the partial stela at the base of Las Pinturas may have amplified the notion of this area of the structure as sacred space. This is illustrated by the fact that the ash deposit was restricted to the immediate vicinity of the stela. Furthermore, the archaeological record of the ancient Maya contains countless examples of ritual behavior in association with stelae. For example, substela dedicatory caches have been found most Maya sites, including Uaxactun (Smith 1950), Piedras Negras (Coe 1959), and Tikal (Coe 1962). In fact, W. Coe reported in 1962 that, to date, Late Classic caches had been found with 44 stelae across the site, suggesting that this really was common practice at some lowland sites. In regards to the Las Pinturas stela, there is no indication that the stela was originally placed at the base of the pyramid steps, although it is likely that it was originally erected somewhere in the plaza. Identifying the exact timing of when the stela was moved is difficult. However, one likely scenario is that the relocation of the stela itself was

linked to the ceremonial behavior that resulted in the deposits of ash and ceramics along the building façade.

Ceramic Offerings

There is no shortage of evidence that the ancient Maya used ceramic vessels and also sherds as offerings during religious rites. Pottery is by far the most common offering that is found in ritual deposits across the Maya area. It has been found in an array of different ceremonial contexts, including those that are indicative of dedication, termination, pilgrimage and feasting activity. For example, some exquisite examples of cached pottery have been found at Caracol (Chase and Chase 1994); Lamanai (Pendergast 1998), Cival (Estrada-Belli 2003), Piedras Negras (Coe 1959), and Blue Creek (Guderjan *et al.* 1998). Termination deposits, which tend to contain large quantities of broken or fragmentary pottery, have been found at Cerros (Garber 1983; Freidel 1986; Walker 1990, 1998), Yaxuna (Friedel *et al.* 1998), Blue Creek (Brown and Garber 2008), and Piedras Negras (Coe 1959). Ceramic vessels that were offered during pilgrimage activity have been reported from Cerros (Walker 1990), Chichen Itza (Milbrath and Lope 2003), Mayapán (Brainerd 1958), Caye Muerto (Masson 1999a), and La Milpa (Hammond and Bobo 1994). Feasting activity clearly involves the *use* of large vessels, but in many cases their ritual deposition as well. Ceramic deposits that are indicative of feasting have been found at Blue Creek (Brown and Garber 2008), Laguna de On (Masson 1999b), and Nakbé (Hansen *et al.*

2008), and at a number of ballcourts in the Cayumapa Drainage region of northwestern Honduras (Fox 1996).

Ceramic offerings continue to be prominently featured in ceremonial behavior among the living Maya. Nowhere in the Maya area is this more evident than at the shrines around Momostenango, in the northwestern highlands of Guatemala. Linda Schele, who traveled to Momostenango to visit the “six-place shrine,” offers the following account:

It was there (the “six-place shrine”), singularly unimpressive for so sacred a place, located across from the makeshift soccer field at the edge of the hill. On one side was a man-high rise scarred by shallow pits, blackened by centuries of burning copal and covered by the broken remains of hundreds of clay pots. (Freidel, *et al.* 1993: 170-171).

I travelled to Momostenango in 2005 to look for Ch’ute Sabal, or the “eight-place shrine,” which I had been told was still in use. After receiving a series of conflicting directions and spending many hours winding along the roads that surround the town, I realized that perhaps another shrine would do. Once I pulled over and began to explore, I realized that small shrines dotted the landscape. They varied in size and shape, but the contents of each was dominated by piles of broken pottery and ash (Fig. 5.4).



Fig. 6.4: Various Shrines around Momostenango. Photo by author.

Certainly the use of pottery in ritual behavior is linked to the animistic notion that just about everything, according to the traditional Mesoamerican worldview, was and continues to be perceived of as having a life force. John Monaghan (1998: 47), who worked among the Mixtec, illustrates this concept: “In the Mixtec town of Santiago Nuyoo,...the only things I could discover that people *didn't* view as alive were rocks that had been burned by fire (and the people who held this view were a distinct minority).” Whether we interpret the destruction or deposition of pottery as a sacrifice of sorts, or as the termination of the object itself, the underlying philosophy is that the ceramic offering was once alive (McGee 1998; Stross 1998).

Food Offerings

Finding direct evidence for the presence of food offerings, particularly botanical ones, in the lowland Maya archaeological record tends to be a tricky affair. Preservation in a tropical environment is an obvious problem. Moreover, the scholarly efforts to identify plant material in ritual contexts have been lacking. As discussed in previous chapters, with the exception of Bozarth's work at Blue Creek (2004), phytolith and pollen studies have rarely been applied in Maya archaeology to address ritual behavior (see Chapter V). Macrobotanical remains, however, have been identified in a number of contexts, particularly cave sites (e.g. – Brady 1989). For example, Morehart (2005) reports that the burned macrobotanical remains of several domesticated crops, including maize, beans, and squash, were found in Barton Creek Cave, Belize. He concludes from this evidence that it was common practice to make food offerings at these sacred locales.

Food offerings, which often do not preserve over time, were most certainly a common inclusion in Maya burials. For example, at Rio Azul's Tomb 19, nineteen vessels were interred with the deceased and encrusted organic matter was observed inside most of them (Hall *et al.* 1990). This has been interpreted as the residue of food offerings contained within the vessels when they were interred in the tomb. To corroborate this theory, residue analysis conducted on three of the offeratory vessels yielded evidence for theobromine and caffeine, indicating that the containers held cacao at the time of burial (Hall *et al.* 1990). At Copan, excavations at the Margarita Tomb (Burial 93-2) yielded abundant offerings, including four small dishes that held

fish remains and one bowl that contained quail remains (Bell *et al.* 2004). Over thirty vessels of varying sizes and forms were found in this tomb and while no phytolith or residue studies were conducted, it is likely that many of them once contained edible goods. Due to issues of preservation and perhaps the limited extent of the analyses performed, only the bones of faunal offerings were identified in the assemblage.

Portrayals of humans making offerings of food to their gods abound in Maya art. Tamales are an especially prominent food offering in Classic Maya art and are often portrayed as round balls or “corn curls” on an open plate (Taube 1989). The earliest portrayal we have of this is from the North Wall of the San Bartolo murals, in a scene where a young woman in a kneeling position is holding a plate of tamales and clearly raising them up in offeratory gesture to the Maize God (Saturno *et al.* 2005) (**Fig. 5.5**). Similar imagery can also be found in the vivid renderings shown on Classic Maya cylinder vessels (**Fig. 5.6**).

Often closely tied to these images are texts written along the rim of vessels, otherwise known as the Primary Standard Sequence (PSS), that describe the function, contents and owner of the object (Houston *et al.* 1989). According to Reents-Budet (1994), decorated serving plates, or *lak*, were often used to hold offerings, including blood-spattered paper and food.



Fig. 6.5: Woman Offering Tamales to Maize God, Las Pinturas North Wall Murals (Drawing by Heather Hurst)



Fig. 6.6: Late Classic Vase Portraying Offering Tamales to Maya Deities (Kerr # 504)

There are many examples of this practice among the living Maya. Linda Brown (2002), who looked at 70 modern shrine sites across the western highlands of Guatemala, found that food offerings, particularly burnt ones, were abundantly

represented in the features. Among the offerings were cilantro, cookies, corn, *chorizo*, eggs and mushrooms (see Brown 2002: Fig. 5.8 for a comprehensive list). Redfield and Rojas (1990), who worked among the Yucatec Maya of Chan Kom in 1934, describe a number of specialized foods that are offered to the gods. Most of the foods are specialized arrangements of tortillas that are filled with *zicil*, a paste made from ground squash seed and water. These rituals entail first an invitation to the gods to partake of the food, followed by a period during which the gods receive the food, or its essence, and finally a feast among the practitioners. Among the Lacandon (McGee 1990) and the Zinacantecos (Vogt 1993), food is symbolically offered to the gods (see below).

Fire

It has already been established that the deposit on the face of Las Pinturas was the result of burning. Not only did the samples contain abundant particulate charcoal, but some of the cultigen phytoliths were charred (also see Chapter V). The burning of offerings and the creation of fire were key components to most Maya ceremonies. Karl Taube (1998) describes fire as an important method by which the performers of the ceremony could communicate directly with their gods. In a process he refers to as “focusing,” the officiates of the ceremony used the fire as a way to direct the attention of the divine to the event at hand (Taube 1998: 449). By this definition, fire was absolutely essential for the Maya to attain the larger goal of the rite, that is, for the message or gesture to reach the supernatural forces that controlled their lives. In

addition to providing a conduit for communication, fire was often used as a means for change (Miller and Taube 1993), transformation (Stone 2002), and rebirth (Garber *et al.* 1998). Stone (2002) has suggested that the burning of rubber offerings by the ancient Maya made it become gifts of blood for the gods. The power of fire to transform objects is a prevalent theme in ceremonies among the modern Maya, a topic that will be discussed in more detail below.

David Stuart (1998) has found phrases like “the fire enters” are often found in texts discussing dedication rituals, suggesting again that burning events were integral parts of ceremonial practices. Indeed, the famous Yaxchilan Lintel 24 portrays Itzamnaaj Balam II holding a burning torch over his wife, Lady K’ab’al Xook (**Fig. 5.7**). Part of the associated text reads, “...in penance with the fiery spear,” indicating that the fire itself is a kind of sacrifice

(<http://www.peabody2.fas.harvard.edu/CMHI/about.php>, July 7th, 2009).



Fig. 6.7: Lintel 24 from Yaxchilán
 (Retrieved from: www.famsi.org on 7/8/09, JMO #1524)

Other images in which religious rites are accompanied by smoke and fire are prevalent in Maya ceramic, stone and mural art (e.g. -**Figs. 5.8 & 5.9**). This theme is also present in the Popol Vuh, as Hunahpu and Xbalanque endure death by fire in order to then be reborn (Tedlock 1996). Evidence for the correlation between fire and ceremonies abounds in the archaeological record of the ancient Maya. In addition to the finds at Las Pinturas, some evidence of burning is commonly found in association with the material remains of Maya ritual practice at sites like Blue Creek (Guderjan 2004), Colha (Mock 1998), Blackman Eddy (Garber *et al.* 1998) and Tonina (Becqueln and Baudez 1979-82).



**Fig. 6.8: Late Classic Vase Showing Palace Scene with Burning Offering
(Kerr # 7020)**



**Fig. 6.9: Late Classic Vase depicting Offering Vessel with Fire Emerging
(Kerr # 759)**

Among the living Maya, the theme of fire as a means for transformation is a pervasive one. Brown (2002: 92) suggests that, “through changing the solid form of the offerings into smoke, the ritual practitioner transforms them into a state appropriate for consumption by the deities.” For example, the Lacandon burn *pom*, or copal incense, in order to transform it into tortillas that are then eaten by the gods (McGee 1990). In a similar provision of offerings to the divine, the Zinacantecos believe that candles become tortillas and the smoke from the burning of copal becomes cigarettes (Vogt 1993).

These examples illustrate that among the living Maya, much like the ancient Maya, fire is an integral facet of successfully “delivering” gifts to the gods. The concepts of rebirth, transformation and sacrifice that surround burning events in modern and ancient religious performance among the Maya have important implications for the Las Pinturas deposits. The burning of offerings like squash may have simply converted them to smoke, a necessary step in making them “edible” for the divine.

Water

One explanation for the presence of diatoms, golden algae, and fern spores on the pyramid is that water was being ceremonially offered. There is no shortage of evidence that water was and continues to be sacred to the Maya.

Scarborough (1998) has asserted that in environments like the Petén where water could be decidedly scarce, the elite would have ritualized its use for the display and maintenance of power. His study relies heavily on data from Tikal, located approximately 60 km southwest of San Bartolo, so both sites would have faced similar challenges in maintaining a constant supply of water. Lucero (2003), who has examined this issue somewhat more broadly across the Maya area, asserts that Maya rulers would have performed water rituals to legitimate their power. She suggests that given the paucity of available drinking water at many Maya centers during the dry season, religious rites that incorporated water would have been poignant manifestations of wealth and power.

Recent excavations at Cival, located in the northeast Peten, uncovered an extraordinary Middle Preclassic cache comprised of five smashed jars and five jade celts (Estrada-Belli 2006; Estrada-Belli *et al.* 2003). The contents of the jars remain a matter of some debate, but Estrada-Belli (2006) has suggested that they may have contained water, or an alcoholic beverage like *balché* or *chicha*. However, he has illustrated quite adequately that the jade celts represent four sprouting maize plants placed in the four cardinal directions with the *axis mundi* in the center. He has also drawn a parallel between the Cival cache and imagery from the Codex Borgia, in which four Tlalocs, each oriented with a cardinal direction, pour water onto four maize plants. Estrada-Belli (2006: 62) concludes that this arrangement of sacred objects at Cival, "...evoke the supernatural powers of water, rain and maize deities." Given this interpretation I would assert that it is highly likely that the five jars once held water, rather than some kind of alcoholic or other specialized beverage.

Large jars, or *ollas*, which would have held liquids like water are prominently depicted in Maya art. While many of the jars are labeled as containing alcoholic beverages (see Kerr 1092, for example), they are sometimes not labeled nor mentioned in the text (**Fig. 5.10**). It seems that there is an assumption that liquid-holding vessels depicted in courtly ritual scenes held specialized beverages like *chicha* or *balché*. However, given the sacred nature of water particularly in the lowlands, along with the frequency with which *ollas* are unlabeled, it is logical that some of these vessels were rendered as water jars.

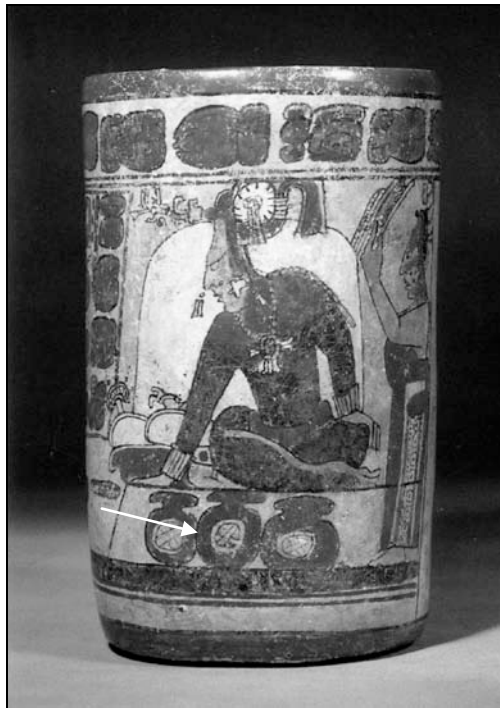


Fig. 6.10: Image of Three Water Vessels Below Throne.
 (The cross-bands probably identify them simply as “clay objects”)
 (Image and interpretation from Reents-Budet 1994: 88-89)

Ethnographic work among the living Maya illustrates how they continue to offer water to the divine. Among the Yucatec Maya, an early phase of the rain ceremony (*cha-chaac*) entails collecting and ultimately offering “virgin water” from the sacred *cenote* or from a cave. This water is then brought back to the altar in calabashes by the participants and subsequently used to make *zaca*, a drink that is comprised of mostly water and a small amount of cooked ground corn (Redfield and Rojas 1990: 39). The *zaca* is then offered to the gods. This notion of “virgin water” for use in Yucatec ceremonies was also reported by Diego de Landa in the 16th century (Tozzer 1941: 105).

Linda Brown (personal communication 2009), who participated in rites among the highland Maya, was told to bring a bottle of “agua pura” and a bowl to a

ceremony held on the day of Imox. The bowl of water was put on the altar where it remained until the ritual was complete. Imox is one of the 20 days in the Maya sacred calendar, or *tzolkin*, and has crocodile and water associations (Thompson 1990). According to Barbara Tedlock (1992), during rites involved in the initiation of new daykeepers, sacred water from Paja (“At the Water”), along with other ritual paraphernalia, is offered to the gods.

Work by Vogt (1993) has illustrated the important role that water from sacred water holes in Zinacantan plays in certain healing ceremonies. During the ceremony, the shaman creates “flower water” from a number of ritual plants and the sacred water. The “flower water” is used in various cleansing rites throughout the ceremony and is then placed under the patient’s bed, where it remains for several weeks until the healing period is complete.

It is evident and quite logical, given the limited availability of water for many lowland communities, that this resource was somewhat ritualized among the ancient Maya. While a number of scholars have addressed water rites and have made strong arguments for the likelihood that the Maya were performing these types of ceremonies in the past (e.g. – Lucero 2003; Scarborough 1998), direct evidence for the use of water in ritual practice is lacking. Moreover, there may be an inclination among current scholars, perhaps because water is not named in the PSS as other beverages are, to assume that large jars used in ritual practice contained some kind of libation. However, the paleoethnobotanical remains and their preservation on the façade of Las Pinturas do provide direct evidence for the actual presence of water in

an ancient Maya ritual context. I suggest that this is not an anomaly, but rather that water was and continues to be a profoundly sacred offering in certain types of ceremonies.

Smoke

The evidence for burning in conjunction with the evidence that water was brought to the pyramid not only indicates that the water itself was an offering, but that it was integral to the overall performance of the rite. The evidence for burning and water, along with the paucity of charred phytoliths identified in the ash samples (see Chapter V) suggests that perhaps the Maya were trying to achieve a smoldering, smoky fire. This would indicate that it was not just the fire, but the smoke that acted as a key element of Maya ceremony.

The ritualized creation of smoke is illustrated in both the epigraphic and iconographic record of the ancient Maya. For example, Fitzsimmons (1998) has shown that in celebration of the one *katun* (approximately 20 year) anniversary of Ruler 1's death at Piedras Negras, a member of the elite performed a ritual at the former king's tomb that entailed directing smoke into the chamber. While the event was likely a much more complicated affair than the text suggests, the fact that the act of directing smoke summarizes the entire rite illustrates that it was an integral part of the ritual. Grube *et al.* (1999) have described how carved glyphs on stelae across the southern lowlands mention a kind of "smoke ceremony" that likely involved the burning of incense. At Palenque, in what is clearly the highly ritualized accession

scene of K'inich Kan B'alam II, there is an image of God L holding a cigar or pipe with smoke billowing out in multiple directions from the end (**Fig. 5.11**).



Fig. 6.11: God L Smoking a Cigar or Pipe, Temple of the Cross, Palenque
(Retrieved from www.famsi.org on 7/13/09, Schele #176)

Certainly the burning of incense, which was and continues to be commonplace in ancient and modern Maya ceremonies alike, produced far more smoke than it did fire. This is evident among the Zinacantecos of highland Chiapas, who burn offerings, particularly incense, as part of many important ceremonies (**Fig. 5.12**). Below is an excerpt from a chant spoken by a Zinacanteco shaman at a mountain

shrine as part of an elaborate healing rite:

Take this, then, Father
Receive this, then, Lord...
If you will accept this graciously,
If you will think well of me...
This humble amount...
This humble bit of incense
This humble bit of smoke...
(Vogt 1993: 77)

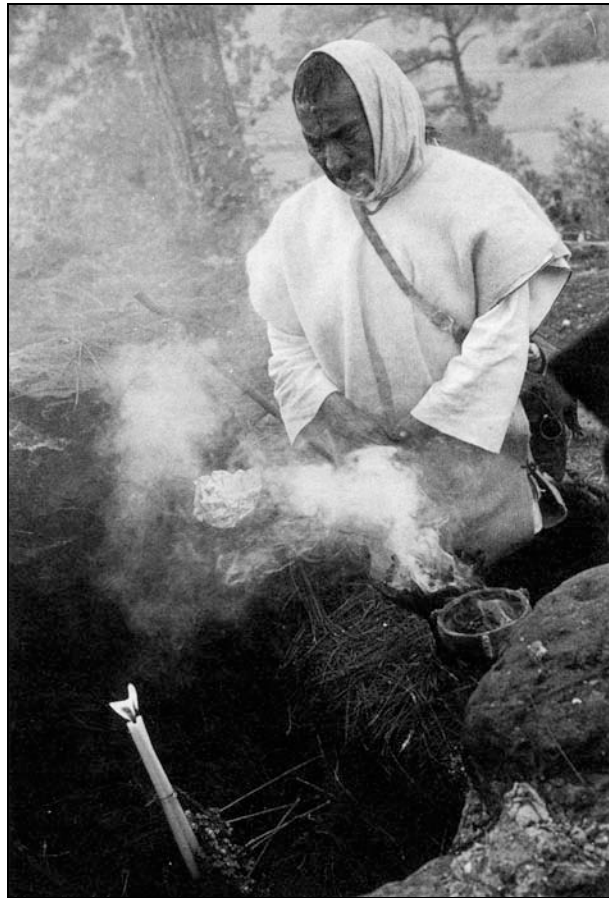


Fig. 6.12: Zinacanteco Shaman Burns Incense (From Vogt 1993: Fig. 1)

Among the K'iche Maya, sacred water is sprinkled on burning copal incense and pot sherds during part of rites surrounding the initiation of new daykeepers (Tedlock 1992). The creation of smoke is not only provides an essential conduit of communication, but undoubtedly adds to the theatrics and drama of the event.

It is possible that the ancient Maya officiating the ceremonies along the Las Pinturas façade were providing offerings of incense as well. Unfortunately, copal remains rarely preserve in any form. However, the evidence for water and burning activities along the pyramid face might suggest another method by which the ancient Maya created smoke during religious performance. This notion of intentionally making a smoldering fire was first proposed by Steve Bozarth (personal communication 2008) during one of many long discussions about the unique nature of the Las Pinturas phytolith assemblage. Given the ethnographic and epigraphic evidence for the role of smoke in Maya ceremonies, it seems that this a feasible explanation, albeit one that I may never be able to unequivocally prove.

Intentional Burial

The preservation of pollen suggests the deposit may have been rapidly and intentionally buried (see Chapter V). While excavations did not reveal any consistent cap that the Maya may have used to cover the entirety of the ash deposit, in one excavation (SB-1C-20), a layer of smaller stones (as opposed to the large stones from building collapse) was found just above the ash layer (see Chapter III). Furthermore, even compact soil would have done the job, which is something that might not have been detected during excavation. The purposeful burial of the ash and ceramics may have been performed as some kind of act of protection. This behavior can be likened to the placement of caches in many Maya structures (see above). The term “cache” was first defined by William Coe (1959: 77) as a hidden deposit that is comprised of, “...one or more objects found together, but apart from burials, whose grouping and

situation point to intentional interment as an offering.” As discussed above, caching practices are exhibited at sites all over the Maya area. Other protective acts may be less overt in an archaeological sense. For example, at San Bartolo’s Jabalí group, excavations exposed a layer of small stones that encased the north mask on a Late Preclassic structure. This feature has been interpreted by Pellecer Alecio (Pellecer Alecio *et al.* 2008) as evidence for the intentional protection of the mask.

In regards to the living Maya, it is interesting to note that the officiates of ceremonies often do not seem inclined to bury or protect the offerings in this manner once they are interred. This is evidenced by the fact that shrines are left open with the offerings exposed (Brown 2000; Tedlock 1982). However, Tedlock reports that if shrines are “neglected” or forgotten they will become “hungry for offerings” and will bring bad fortune to those responsible (1982: 81). This may provide a window into why an offering site might be covered over, or protected, if use of it were to be discontinued. This notion is illustrated among the Lacandon Maya. When it is time to retire or “kill” one of their god pots, their most precious ritual items, they “wash it with fire,” take it to a cave, and cover it with palm leaves (McGee 1998: 45).

The evidence from Las Pinturas illustrates a clear set of the behaviors that are ceremonial in nature. The localization of the ash and ceramic deposits and the treatment of the stela are both typical for ritual practice among the Maya. The data recovered from three deposits indicates that pottery, food and water were being offered, that fire and smoke were intentionally created (and perhaps “offered” in a sense), and that the remains of the ceremony were intentionally covered over and

protected shortly after the rite was complete. These conclusions provide a solid spring board from which to approach the nature of ritual practice across the site.

Looking for Patterns of Ritual Behavior Across the Site

Four different structures have been discussed thus far: Structure 63, Las Pinturas, Las Ventanas, and the Palace Tigrillo. Structure 63 and Las Pinturas have yielded substantially more data than the other two contexts, although the nature of these data sets varies considerably. The evidence from Structure 63 is summarized in Chapter III and more detailed information can be found elsewhere (Craig 2004). The Las Pinturas finds have dominated discussions thus far because finds from this context are the most fruitful in regards to understanding the ash layer. The comparison of the archaeological, ceramic, and paleoethnobotanical data from these four very different structures show varying levels of continuity and disjunction. However, there are some clear patterns of behavior that illustrate the larger homogeneity of Late Classic ritual behavior at San Bartolo.

A comparison of plant remains recovered from Las Pinturas, Las Ventanas and the Palace (ash from Structure 63 was not available for the phytolith study) have been discussed in previous chapters and will only be summarized here (see Chapter V). The evidence for water-related plants, abundant tree leaf remains, and the presence of *Calathea* and *Inga* (guava) phytoliths in all three contexts shows significant continuity and suggests that water, smoke, and food offerings were being made to the divine at all three locales. The paleoethnobotanical finds do show some

variation in the presence of cultigens between the three contexts. For example, *Zea mays* phytoliths were only identified at Las Ventanas and *Phaseolus* (bean) remains were only found at Las Pinturas. However, given the low proportion of cultigens recovered in the sample in general, this variability could just as likely be the result of sampling error as it could be evidence for actual differences in the types of plants deposited at each structure.

There is abundant variation between the quantities of ceramics that were recovered in association with the deposits at the four structures (see Chapter IV). One major difference is in the quantity of sherds recovered. The sherd assemblages from Structure 63 and Las Pinturas were considerably larger than those recovered from the Palace and Las Ventanas excavations (see **Table 4.9**). There is also considerable variation between the two large assemblages in terms of both size and the types represented. For example, an inordinate number of Saxche Palmar polychromes were recovered from Las Pinturas, which sets this context apart from all other contexts at the site (see **Table 4.9**).

Finally, the archaeological contexts of the four ritual deposits are somewhat distinct from one another. At Las Pinturas the offerings were clearly deposited on a Late Preclassic structure (see Chapter III). At Structure 63, the ceramics and ash were recovered from within a Late Classic structure, but in association and clearly directed at a Late Preclassic monument (see Chapter III). At the Palace and Las Ventanas, the ash deposits were found on structures that had undergone varying degrees of remodeling during the Late Classic. Furthermore, there is abundant

evidence that people were living in and around Las Ventanas, Structure 63, and the Palace at this time, something that cannot be said for the Las Pinturas group or its immediate vicinity. The discrepancies in the archaeological contexts, among the plant remains, and within the ceramic assemblages from Structure 63, Las Pinturas, Las Ventanas, and the Palace suggest that perhaps several discrete, non-coeval rites were going on at these locations.

Structure 63

I have asserted in previous chapters that the events at Structure 63 can be best described as the “perpetuation” of the shrine (see Chapter III). This term arose out of the fact that the deposit as a whole did not fit into any kind of pre-defined ritual category like “dedication” or “termination.” I would now also add the terms “feasting” and “pilgrimage” to the typology. These terms are employed in ritual studies as a means for summing up what drove the ceremony or what motivated the practitioners. While they are very useful for describing many ceremonial deposits across the Maya area, there are many features that fall outside the box. At Structure 63, for example, there is a massive deposit of broken and burned sherds, many of which have potential “kill holes” (see Chapter IV). However, the deposit also contained human remains, fine ash, and charcoal. I have explored elsewhere (Craig 2004) why “dedication,” “termination” and “pilgrimage” are less useful for describing the Structure 63 deposit than is the term “perpetuation.” It is clear from the distribution of artifacts around the monument that the driving force behind the

rites at Structure 63 was the potbelly itself. So, while many different behaviors likely resulted in the accumulation there, the over-arching *reason* that the offerings were placed within the structure was to venerate the Preclassic monument.

Las Ventanas and The Palace Tigrillo

The deposits found at Las Ventanas and the Palace are similar not just at the microbotanical level, but because they were recovered from a “high traffic” area of Late Classic San Bartolo. The area around the Main Plaza certainly has yielded abundant evidence for residential, civic, and ritual behavior during the Late Classic. Furthermore, both buildings were extensively remodeled during this time period. Excavations at Palace indicate that it was completely renovated and was a functioning royal residence during this time (Runggaldier 2009). Room 1 was constructed on top of Las Ventanas during the Late Classic and likely functioned as an administrative, as well as ritual space (Urquizú 2005). The nearby Las Plumas group functioned as an elite residential compound complete with sleeping benches at this time (Ortiz and Mencos 2004). Structure 63 was an active shrine during the Late Classic, and was located just south of the Palace and just off the Main Plaza.

Clearly the Main Plaza was a highly active part of San Bartolo during this time period. It’s logical that the *perception* of this area of the site would have been quite different from that of the abandoned Las Pinturas plaza. As such, the ceremonies that resulted in the deposition of ash in the two areas of the site may have had very different intentions. Before elaborating on Las Pinturas to illustrate this

contrast, however, it is first necessary to look at the evidence for ash deposits site wide. In fact, it seems that the burning events at Las Ventanas and the Palace may have been part of something much larger.

Evidence for the Deposition of Ash Across San Bartolo

Beyond the excavations that have been looked at intensively thus far, numerous other contexts across the site have yielded evidence for similar deposits of ash. Investigations at the Jabalí Group and Las Plumas have yielded finds that show some striking similarity to the ash deposits found at Las Ventanas and the Palace (Fig. 5.13).

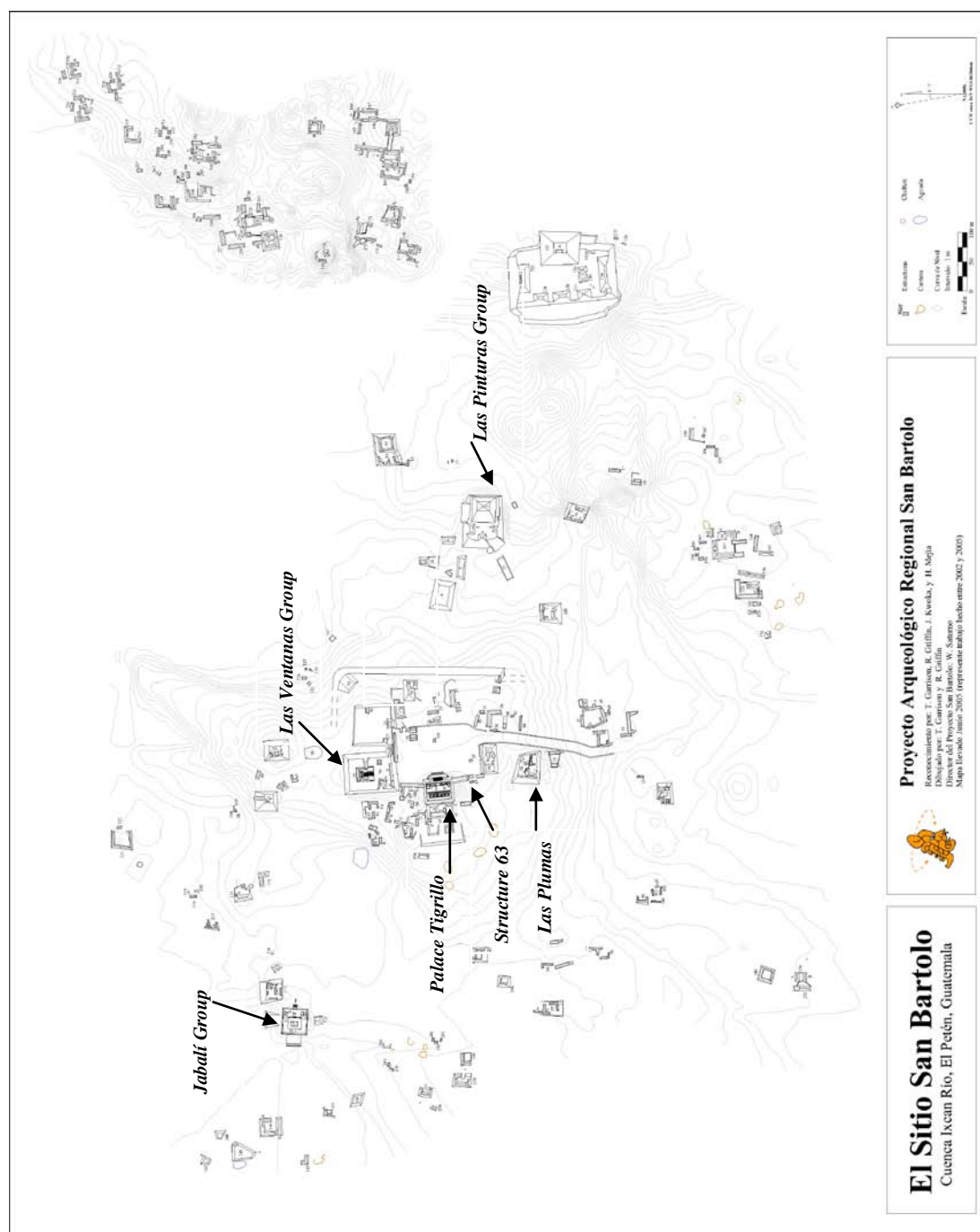


Fig. 6.13: Relevant Ritual Deposits Found Across San Bartolo
(Map drawn by T. Garrison and R. Griffin in 2005)

At the Jabalí Group, Pellecer Alecio (2004) observed compact deposits of ash, ceramics, and lithic material ranging from 10-25cm in thickness at the base of the

east-facing, front steps of Structure A (**Fig. 5.14**). The structure is Late Preclassic, but experienced some remodeling during the Late Classic. It should be noted that the deposits were located on non-remodeled Preclassic portion of the structure. The ceramic assemblage was a mix of Late Classic and Late Preclassic sherds. Castillo and Sagebiel (2004) have characterized the Late Classic assemblage as dominated by utilitarian ceramic groups like Cambio and Encanto (see Chapter IV for group descriptions) with a very low representation of polychromes or other slipped types.

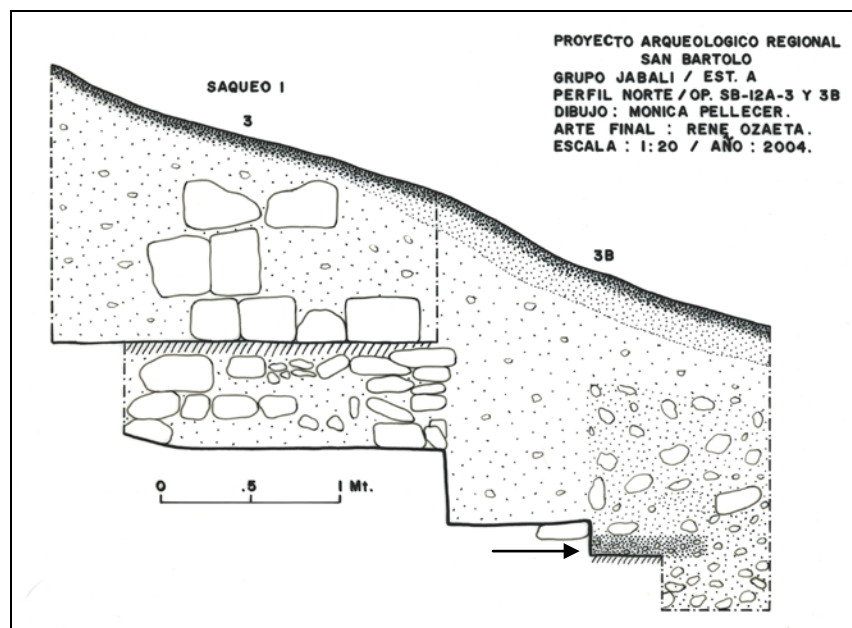


Fig. 6.14: Profile of Structure A Staircase, Note Ashy Deposit at the Base (From: Pellecer Alecio 2004)

Excavations at San Bartolo's Platform 112, also located in the Jabalí group, exposed a large deposit of ash, burned rock and Late Classic ceramics (Pellecer Alecio *et al.* 2008) on top of and within the structure. Platform 112 has been interpreted by Pellecer Alecio (Pellecer Alecio *et al.* 2008) as a kind of “protective structure” for a smaller building adorned with masks underneath (**Fig. 5.15**). She

describes the event as the “ritual internment” of the earlier building. Indeed, the ash and ceramic deposit found underneath Platform 112 was in direct contact with the north mask on the Late Preclassic structure (the south mask was destroyed by tree roots).

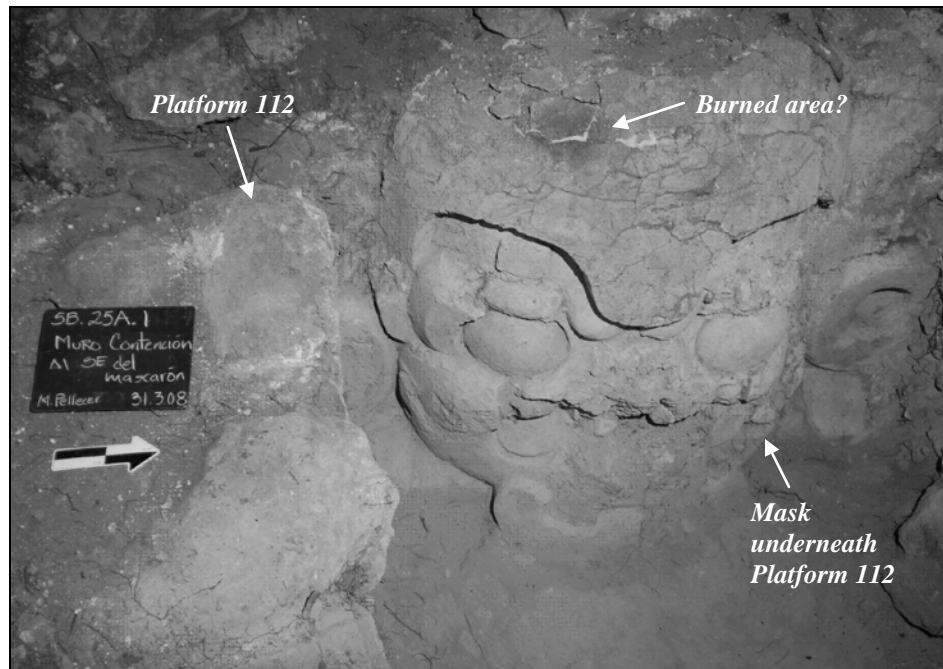


Fig. 6.15: Platform 112 and Mask (From: Pellecer Alecio 2004)

Pellecer Alecio proposes that the ritual deposits represent one massive termination ritual that was centered on the masks. She suggests the following order of closely-spaced events occurred at Platform 112: 1) the masks were first protected with a compact layer of lime paste and rock; 2) the masks were ritually terminated resulting in the ash and ceramic deposits on the mask; 3) Platform 112 was constructed over the masks and then intentionally destroyed, perhaps immediately; 4) Platform 112 was ritually terminated resulting in more ash, ceramics, and burned rock.

However, it seems odd that the Maya would take the time to construct a building over the masks only to subsequently destroy it. Pellecer Alecio's suggestion that the Late Classic Maya were intending to protect the masks seems very feasible, given the presence of a layer of plaster directly on top of the north mask. It seems that this event and the construction of Platform 112 happened at the same time in the Late Classic and was accompanied by offerings of sherds and burning events. I would suggest that any intentional destruction of the Platform 112 and subsequent ritual activity occurred at some later point in the Late Classic and that we are in fact looking at two separate terminations here. The first event was intended to terminate the masks and the second to terminate Platform 112. The ceramic assemblage, which is a mix of Late Preclassic and Late Classic sherds (Castillo 2008) only provide a broad Late Classic date for the entire sequence, so it is quite possible that the two events could be separated by 100 to 200 years.

At Las Plumas, Ortiz and Mencos (2004) reported finding a thin layer of ash in association with large concentrations of ceramic sherds at Structure B, one of the two Late Classic elite residential structures that have been uncovered at this architectural group. At Structure B, large deposits of utilitarian sherds (Castillo and Sagebiel 2004) and 3cm thick deposits of ash were found at roughly the same depth in almost every area excavated. This layer was found directly on top of a badly eroded floor. Ortiz and Mencos also reported that the ash layer was clearly visible in Structure B's looter's tunnels (**Fig. 5.16**). One of the most interesting aspects of this deposit in regards to the discussion at hand is that it lacks visible pieces of charcoal,

an observation that is reiterated many times in the excavation report (Ortiz and Mencos 2004). This general absence of charcoal is something that I also observed when collecting the five of the six samples from San Bartolo (the only exception being the Ventanas 2 sample).

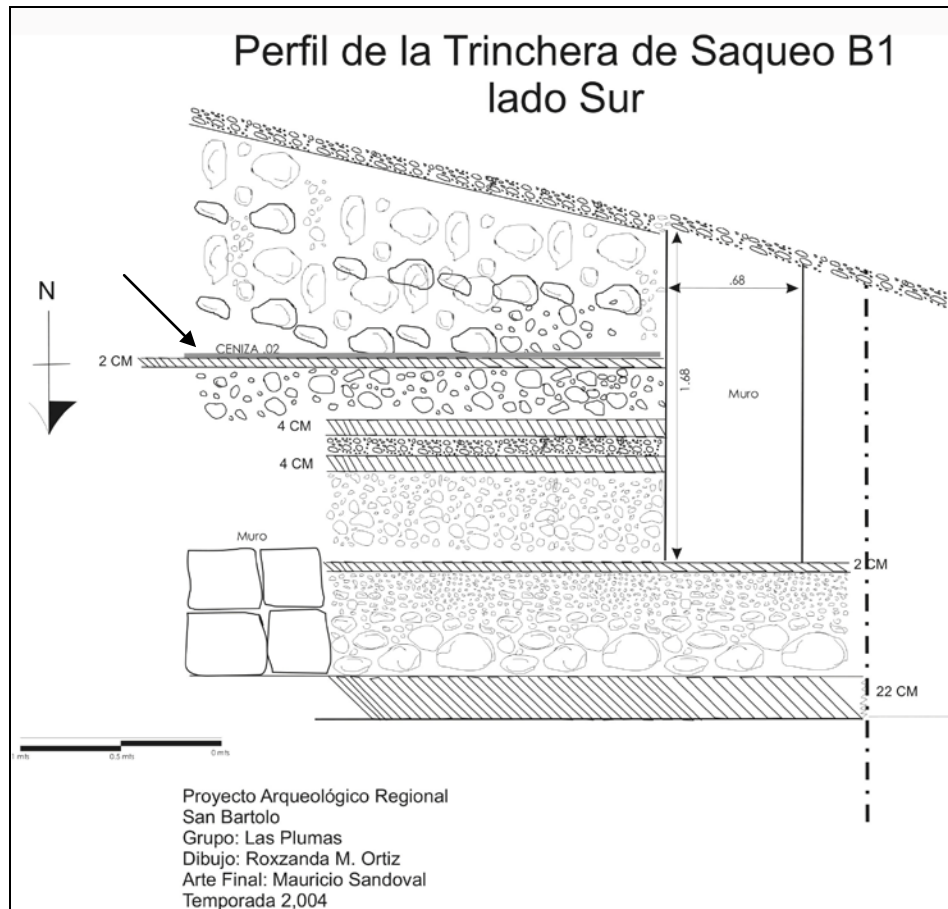


Fig. 6.16: Str. B Profile from Looter's Tunnel. Note Layer of Ash (*Ceniza*)

In terms of archaeological context, there is a remarkable degree of similarity between the ash deposits found at Las Ventanas, the Palace Tigrillo, Jabalí, and Las Plumas. At Las Ventanas, the Palace Tigrillo, and Las Plumas, there is abundant evidence that the buildings functioned as residences, civic spaces, or both by the Late Classic community. It is unclear what the function of Jabalí was during this period,

but it is certain that some structures were being modified at this time, perhaps for strictly ceremonial purposes. At each of these four architectural groups, excavations have uncovered layers of ash associated with varying quantities of ceramic sherds on top the final Late Classic phase of some of the buildings. This suggests that some kind of large scale termination event was happening at these locales, signifying the abandonment of the structures and perhaps the site.

Termination Rituals among the Maya

There is no shortage of evidence for termination rituals across the Maya lowlands, although they have only been recognized as such in the last several decades. William Coe first referred to termination deposits as “exposed offerings,” composed of large quantities of objects, usually sherds, that were “encountered on the latest occupation surface but beneath humus and accumulated debris (1965: 462).” Termination rituals generally imply the end of a structure or object’s “life” or period of use. According to Freidel (1998: 189), “...what we call ‘termination rituals’ are acts of killing, sacrificing, capturing, or exorcising spiritual force from such places or things.” The termination of a structure usually involves the deliberate damaging or breaking of objects before deposition, which acts as a method of “killing” the building. The breaking of objects in these rituals functioned as a method of destroying the sacred space within that structure (Joyce 1992). These ritual deposits are usually found scattered about the surfaces of structure floors and plazas.

Excavations at the site of Cerros, in Belize, have revealed evidence for extensive ritual termination behavior across the site (Garber 1983; Freidel 1986; Walker 1990, 1998). The Cerros examples are particularly interesting because while many of them are relatively coeval, they show an incredible variability in their execution. James Garber (1983) conducted pioneering investigations at Cerros that effectively opened the door for ritual termination as a possible interpretation for ceramic deposits. At Structure 2A-sub 4-1st, he discovered evidence for a massive termination event that was deposited during the Late Preclassic period, just before the building was enveloped by the construction of the main plaza (feature 2A). This deposit included evidence of burning, smashed vessels, deposits of molded painted stucco, smashed jade fragments, and scattered “marl.” “Marl” is a white, pasty, limestone-based substance that was first associated with ritual behavior by David Freidel during his work at Cerros, but may be what William Coe (1959: 79) referred to as “lime paste” found in cached vessels at Piedras Negras. It is commonly associated with termination deposits (Freidel and Schele 1989; Freidel *et al.* 1998).

Also at Cerros, at Structure 4B-1st, a 13m pyramidal building in the site’s ceremonial core, a sample of 6000 sherds was recovered during investigations along the lower east façade of the structure. The feature was dated to the Early Classic based on the ceramic assemblage. The stratigraphy indicated that the deposit was interred before the building began to deteriorate. There is also evidence for the termination of Structures 5C-2nd, 6B, 29B and 3A-1st at Cerros (Freidel 1986;

Garber 1983; Walker 1998). These deposits contained broken vessels, white marl, and “lenses of charcoal” (Garber 1983:804).

At the site of Colha, in Belize, investigations have yielded the identification of what Shirley Boteler Mock (1998) has interpreted as a massive termination event involving the deposition of 30 elite individuals and large quantities of Late Classic sherds. No reconstruction was possible with the materials recovered from this deposit, a fact that Mock attributes to “purposeful scattering” or the intentional selection of used portions of vessels, “...and other ‘garbage’ to emphasize the final debasement of the elite” (Mock 1998: 114). In other operations across the site, excavations revealed similar deposits of deliberately smashed Late to Terminal Classic pottery in ceremonial and elite structures.

At Yaxuna, in northern Yucatan, excavations at Structure 5E-52, an elite residence, have uncovered evidence for the intentional destruction of the building at the end of the Early Classic (Freidel *et al.* 1998). The wall stones and fragments of the stuccoed frieze of the building façade were found layered in a deposit of white marl. This event marks the last evidence for an occupational phase of Structure 5E-52. Excavations at Terminal Classic Structure 6F-68 yielded large deposits of sherds, charcoal and burned rock along the building facade, along with evidence for its intentional destruction (Ambrosino 2003), indicating that similar termination events occurred later in Yaxuna’s history.

Behaviors that can be likened to termination in the Maya past have been observed among the living Maya. These acts often entail the ritual smashing of

vessels or other objects that hold religious importance as a means for removing their life force. Brian Stross suggests that the act of smashing objects "...constitutes one way of deactivating or de-animating them and releasing the soul" (1998: 37). Stross (1998) explains that human-made objects must acquire and shed their supernatural "identity" by way of ceremonial events, and must in turn be "de-activated" through ritual. Related ethnographic research among the Lacandon Maya suggests that the deliberate breaking of objects is a process that removes not only an item's "life," but more importantly its power. McGee (1998) explains how "god pots" have the paint burned off of them as part of a termination ritual.

In both the archaeological and ethnographic record, breakage and fire are used as means for terminating powerful objects and places. While these ceremonies have undoubtedly changed drastically over time, the basic concept of removing something's sacred value or power by "killing" that object or locale, has survived in the collective spirituality of the Maya for over 2000 years. Returning to the ancient Maya, the common denominator in the events described above is that the termination deposits were laid down fairly soon after the date of the building's final construction phase. In some examples, like at Cerros (Walker 1998) there is even evidence that the structure was fully intact when the ceremony occurred. This pattern illustrates how the over-arching function of termination events was to formally end the period of structures period of use.

Las Pinturas

Despite the fact that the finds at Las Pinturas include deposits of ash and ceramics seemingly similar to those that were recovered from other locales across the site, assigning the label of “termination” to the event or events that occurred there does not adequately explain the deposits themselves nor the ceremonies that resulted in their deposition. One of the most challenging aspects of interpreting ritual behavior is deriving some larger meaning for the event or events that took place. It is logical that some ceremonial deposits would take on myriad meanings. For example, at El Peru-Waka, Navarro Farr *et al.* (2008), describes how finds from Late Classic Structure M13-1 represent a series of Terminal Classic ritual events that include desecration, termination and dedication. They illustrate how the complexity of the deposits found on this building indicate that they had discrete intentions. This begs the question: in regards to ritual deposits, how do we interpret the over-arching meaning, intention, or desired outcome of the rites for the participants? In interpreting the ash and ceramic deposits from Las Pinturas, similar issues arise. There is strong evidence that termination events were going on all over the site during the Late Classic. However, there is equally convincing evidence that the Las Pinturas group was truly a neglected ruin at this time.

To reiterate, evidence for ceremonial behavior in the form of deposits of ash and ceramics was identified on two plaza-facing corners of Las Pinturas, at the base of the building’s central staircase, and just off the platform in the reservoir (see Chapter III). The ash at the base of the steps was associated with a relocated Late

Preclassic stela. There is absolutely no evidence that the structure nor the plaza were remodeled nor occupied during the Late Classic. Furthermore, the only evidence for any activity at this architectural group is ritual in nature. As discussed above, termination, as it has been defined, was generally intended as a means for ending the period during which a building or monument was in use. Therefore, it seems strange that the Maya of San Bartolo would terminate a building that had been utterly out of use for over 400 years.

It is most plausible that the driving force behind the ceremonies that were performed on the façade of Las Pinturas was the ancestral quality of the building itself. Given that there is absolutely no evidence that the building or any other structure on the platform was being used for *any* activity other than that which resulted in the deposition of the ash and ceramic deposit, which I have argued either occurred in one event or in rapid succession, it seems that Las Pinturas truly represented an untouched relic of the past. As such, the events that occurred here are clearly distinct from those at Las Ventanas, the Palace Tigrillo, Jabalí, and Las Plumas.

Veneration of Ancestral Features among the Maya

While the specialized ritual behavior that occurred at Las Pinturas during the Late Classic sets it apart from other ceremonial activity across the site, the practice of veneration is in no way unique to San Bartolo. Investigations at sites all over the Maya area are yielding evidence that the Maya recognized the inherent power of

ancestral buildings and monuments and consequently treated them in special ways via acts of reverence (Potter 1982; Manahan 2008; Navarro Farr *et al.* 2008). It is clear from this data that the Maya were acutely aware of and felt obligated to their ancestors, even at sites like San Bartolo, which experienced such a long period of abandonment that there is a probable lack of genealogical continuity between the two populations (see Chapter II).

Evidence for this special kind of reuse has been recovered from excavations at sites across the Mirador Basin, most of which reached their height of occupation during the Middle and Late Preclassic periods, experienced a major abandonment, and were reoccupied during the Late Classic (Hansen *et al.* 2008). At a number of these sites there is evidence for Protoclassic ritual activity, despite the fact that populations had largely vacated the area at this time. For example, excavations at Nakbé's Structure 51, a Middle Preclassic E-group, recovered a thick deposit of Protoclassic sherds and ash, some of which was located directly on top of the architecture (Hansen *et al.* 2008). There was no evidence that the building was altered during the Protoclassic. Rather, the evidence suggests that the platform was chosen as the site for ceremonial activity because of its connection to the past. Hansen has also found abundant evidence for a host of Protoclassic ritual activities associated with Late Preclassic architecture at El Mirador, including offerings that had been "...burned into a fine ash" (2008: 40). During the Late Classic many of the Mirador Basin sites experienced limited resettlement. The nature of architectural and

ceremonial activity at this time, which largely mirrors the Late Classic at San Bartolo, is summarized by Hansen and his colleagues below:

While Late Classic settlers were reoccupying a landscape replete with abundant monumental architecture, they responded to it in two basic ways: they largely ignored much of that architecture in practical terms, yet they clearly venerated some buildings by engaging in rituals on them and, in a few instances, conducting addition minor constructions or maintenance (Hansen *et al.* 2008: 44).

At the site of Colha, the bottom two steps of a large Late Classic platform was covered with Terminal Classic polychrome sherds as well as chert tools (Potter 1982). The presence of a layer of soil and debris between the deposit and the architecture suggests that the building was abandoned for some time before the offerings were made. Potter (1982) interprets the finds as evidence for continual ritual practices that occurred during the Terminal Classic period.

Just as the ancient Maya reused their buildings, so, too did they resurrect and venerate ancestral monuments. There is abundant evidence for this behavior at sites across the Maya area (Coe 1962; Graham 1979; Demarest *et al.* 1982; Hammond and Bobo 1994). Demarest and his colleagues have warned that as scholars we should consider, "...that the resetting of sculpture was a near obsession with many Mesoamerican peoples" (Demarest *et al.* 1982: 570). This behavior is well documented at Tikal, with the resetting of Stelae 31, 4, 14, and 23 (Coe 1962) and at La Milpa, with the relocation of at least seven of the seventeen stelae that were investigated by Hammond and Bobo (1994). Furthermore, the movement of stelae and other stone monuments was often accompanied by ritual behavior that included the offering of ceramics and burning events. At the Mirador Basin site of Tintal,

excavations recovered a Preclassic monument located on a low platform surrounded by a large deposit of Late Classic sherds and ashy soil (Hansen *et al.* 2008). At Nakbé, several Preclassic monuments, including Stela 1, were relocated during the Late Classic and found in association with abundant Late Classic ceramics, obsidian blades and evidence of burning (Hansen *et al.* 2008). At La Milpa, Terminal Classic Fine Paste Wares were found with several relocated Late Classic monuments (Hammond and Bobo 1994). Finally, the ritual reuse of monuments is also illustrated from evidence at San Bartolo's Structure 63, a Late Preclassic potbelly that was enshrined in a Late Classic structure.

Among the living Maya, there is abundant evidence for the veneration of ancient sites. Tozzer (1907) reports that the Lacandon frequented the site of Yaxchilan and performed important rites there, often leaving behind their god pots. One of McGee's (1990) informants told him that Yaxchilan was in fact where the Lacandon gods resided. At Tikal and other sites, the Guatemalan government has constructed a number of round concrete slabs that are designated specifically for modern ceremonies. The highland site of Iximché continues to be used by the Kaqchikel-speaking Maya and other groups for important rituals, including the celebration of the Maya New Year. The ceremony I witnessed there in October 2005 entailed the making of many offerings, including candles, flowers, a live chicken, and various other foods. Hansen has reported that a group of Kaqchikel shamans performed similar rites at El Mirador in 2006 (Hansen *et al.* 2008).

Continuity among the Ash Samples

The evidence from San Bartolo suggests that the ash and ceramic deposits recovered from the façade of Las Pinturas represent a unique ceremony. However, while there is clear discontinuity between the deposits, there is remarkable similarity within the analyzed ash deposits themselves (see Chapter V). This suggests that in regards to the use of plants in ceremonial behavior at San Bartolo, there may be common denominators that were used in rites that were otherwise highly variable. Among the San Bartolo ash samples, leaves, *Calathea*, and guava were present across all three contexts. This notion is supported by the abundant evidence for the repetitive use of specific plants among the living Maya.

For example, Barbara Tedlock (1992) describes the integral role that pine needles play in creating sacred space during the final days of a daykeeper's initiation rites. The training of daykeepers is a rigorous and long process, lasting for about 180 days (nine 20-day "months" in the *tzolkin*, or ritual calendar). Toward the end of the training, pine needles are used to form a "temporary altar" in the home of the novice during the beginning of what Tedlock refers to as his or her two "formal initiation days" (Tedlock 1992: 59). The following day, the pine needles and pine boughs are brought to Chu'ti Sabal, one of several shrines involved in the final rites, as an offering bundle (the bundle also contains copal, ash, candles, and other divinatory devices). The pine boughs are used once again to establish a bounded area for performing the ceremonies at this shrine (**Fig. 5.17**). Pine needles are used in a similar fashion among the highland Kaqchikel Maya. While observing the Maya

New Year ceremonies at Iximché, I noted that the concrete altar was covered in a blanket of pine needles before the rites began.



Fig. 6.17: One of Several Hearths at Ch'uti Sabal (Note Pine Boughs)
(From: Tedlock 1992, Fig. 13)

Palm or banana leaves seem to serve the same function for Lacandon rites as pine needles do in highland rituals. According to McGee (1990), these large leaves are used to create a bed on which their sacred god pots are placed. McGee describes how the leaves both purify the area and provide protection for the god pots and the *balché* they contain. *Balché* is an alcoholic beverage that the Lacandon believe is integral to achieving communication with the gods. According to McGee (1990: 75), “...the Lacandon believe the leaves protect the *balché* from

contact with the earth, which would render it unfit for consumption by their deities.” In the ceremonies involving the manufacture of new god pots, Tozzer (1907: 113) used the term “altar” to describe the layer of palm leaves on which the old and new pots are placed during the rites.

Among the Yucatec Maya, Redfield and Rojas (1990) describe how *habin*, or dogwood, leaves are used to cover the altars where most rites are performed. The only exception to this is with the Rain Ceremony, *cha-chaac*, in which *xiat* (a type of palm) is used to cover the altar. *Xiat* is used instead of *habin* in this case because, in the humoral sense, *xiat* is the “coldest” of the ritual plants used among the Yucatec of Chan Kom. The use of this “cold” plant is key to the *cha-chaac* because drought is seen as a “fever of the milpa” (Redfield and Rojas 1990: 130).

It is clear that among the living Maya across the region, local tree leaves and needles are a prominent feature in ritual behavior, particularly in the creation or purification of sacred space. This is at least partly a function of availability: pine is readily available in the highlands, palm in the tropical lowlands, and *habin* and *xiat* in Yucatan. Palm phytoliths were identified in all six of the San Bartolo phytoliths samples (see Chapter V). Furthermore, as I have discussed at length previously, there was an abundance of leaf phytoliths and a decided dearth of wood charcoal identified in the samples. This suggests that burned leaves make up the bulk of the ash. However, the amount of leaves that would have been needed, while it is impossible to quantify in any absolute fashion, would have been considerably more than those used in the ceremonies described above. Nevertheless, based on the ethnographic evidence

above, it is highly plausible that these unknown leaf and palm remains represent more than just fuel for the fire. They may have been used in a similar fashion to purify the area before the ceremony began. It could be that leaves were “fed” to a smoldering, smoky fire at the onset of the rites. It might also be that many “ritual mats,” like those used by the living Maya, are represented in the ash layer. Perhaps a number of ceremonies were performed in rapid succession resulting in a massive accumulation of leaves and other offerings. While it is not possible to derive from the data any concrete scenario on how the use of leaves played out in the past, it is significant that they are unequivocally a prominent feature of the ash.

Unfortunately, phytolith analysis did not permit the identification of specific plant families in this case, which is one of the downfalls of phytolith analysis in regards to the study of trees. However, I suspect that the selection of leaves by ancient Maya was nothing less than selective and careful. Indeed, Vogt (1993) describes how the thirteen ritual plants used by the Zinacantecos in their rites are imbued with meaning. For example, plants are prescribed humoral temperatures, are designated as “wild” or “cultural,” and are generally thought to send specific messages to the gods.

The evidence for the use of leaves for the ceremonies at Las Pinturas, Las Ventanas, and the Palace, along with the evidence for water and the use of *Calathea* and *Inga* in the ceremonies suggests a certain degree of continuity in the face of otherwise disparate events. This indicates that the Late Classic Maya of San Bartolo were employing what could be described as some kind of ritual “recipe,” or perhaps a

“ceremonial *roux*.” Just as *roux* provides the base for any good stew, the Maya, in a somewhat monotonous fashion, employed a number of key plants in ceremonial performance.

Despite this compelling continuity between the ritual deposits across the site, this chapter has illustrated how the ceremonial features are quite distinct in terms of ceramic offerings and archaeological context. At Las Pinturas, excavations recovered a high proportion of polychrome sherds and the building itself exhibits no evidence of remodeling or reuse during the Late Classic beyond the ceremonies that resulted in the ash layer. It therefore seems that the events at this pyramid, much those at Structure 63, represent the veneration of ancestral features. In contrast, at Las Ventanas, the Palace Tigrillo, Jabali, and Las Plumas, the sherd deposits were very limited and the structures were all in use to varying degrees during the Late Classic. The events that resulted in the deposits of ash at these four locales evidently mark the end of this period of use, or the termination of the buildings. The succeeding chapter will explore the larger implications of termination, ancestor veneration, and the repetitive use of ritual plants among the Late Classic Maya of San Bartolo.

Chapter VII

Conclusions

The material record of ritual practices at San Bartolo exhibits some clear patterns that inform us about the way that the community executed ceremonial rites, as well as interacted with and perceived of the city itself. The goal of these investigations was to understand not just the nature of Late Classic religious practice at San Bartolo, but the expectations and intentions of the community that participated in the rites. Patterned ritual behavior, such as that which has been established at San Bartolo, provides a highly informative avenue for addressing these issues of agency and cognitive “maps” that were explored at the onset of this manuscript.

As I have illustrated in the previous chapter in some detail, there are levels of continuity and disjunction expressed in the evidence for Late Classic ritual behavior at San Bartolo. The ash itself shows some remarkable similarity, but the deposits as a whole and their contexts represent at least two different types of ceremonies. While termination and veneration rites had considerably distinct intentions, they exhibit continuity on a number of levels. First of all, there is evidence that the so-called “ritual tool kits” of these ceremonies have some striking similarities. On a somewhat more profound level, both types of rites were a function of the perpetually shifting cultural landscape of San Bartolo and illustrate how the Late Classic community utilized specific buildings as a stage for important ceremonies.

Continuity Among the Ash Samples from San Bartolo: Plant Use and Symbols

There is a considerable amount of continuity between the ash deposits recovered from Las Ventanas, the Palace Tigrillo, and Las Pinturas (see Chapters V and VI). Despite the fact that the archaeological contexts and ceramic assemblages illustrate that they have divergent intentions or meanings, the phytolith remains indicate that the actual plants that were burned in the ceremonies are very similar. Tree leaves dominated the plants represented, and two cultigens (*Calathea* and guava fruit) were found in all three contexts. The repetitive use of these plants in otherwise distinct ceremonies indicates a certain degree of standardization in the ritual paraphernalia employed by the Late Classic Maya at the site.

This notion that Maya ritual behavior was in some ways repetitious has been reported from ethnographic studies across the area. For example, regarding Yucatec Maya rites, Redfield and Rojas (1990: 128) generalize that, "...the resemblances among the different ceremonies are so great that, in describing one in detail, one describes much that occurs in many or even all of the others." According to McGee (1990: 70), "...Lacandon ceremonies are not differentiated much by form or ceremonial action. To the contrary, Lacandon rites are distinguished by the personal motivations or environmental conditions that necessitate the rituals." Finally, Vogt, in describing Zinacanteco rituals, writes that while the actions may show variation, the basic tools and offerings are constant: "All shamans use candles, ritual plants, copal incense, black chickens, and so on. No one dreams, for example, that sheep should be sacrificed in place of chickens or that rattles should accompany the curing

chants” (Vogt 1993: 71). Indeed, the “monotony” of modern ceremonial practice, particularly in regards to offerings, is no surprise when we consider that ancient ritual deposits in general among the ancient Maya are so often dominated by broken pottery and ash.

However, the data from San Bartolo indicates that “ash” is an exceedingly vague description, particularly when it is found in ritual contexts. A closer look at the ash from three different ceremonial contexts at the site yielded a bounty of information that provides clues about the burning events themselves. Moreover, the similarity of the ash in the face of the clear differences between the intentions of the rites themselves illustrates that ancient Maya shamans employed a kind of floral “tool kit.” Just as the Lacandon use palm, the Yucatec of Chan Kom use *habin*, and highland Maya groups use pine, so too did the ancient Maya of San Bartolo and perhaps the central lowlands in general use specific plants in a repetitious manner during varying ritual practices. This is especially significant in the face of the clear variation between intention, meaning, and perhaps timing of the rituals represented in this sample. Whereas termination signified abandonment and “death” of the site, veneration was directed specifically at Las Pinturas and the ancestors it represented.

That the Late Classic Maya of San Bartolo were employing the same or similar plants as the basis for distinct ceremonies illustrates that the role of plants in ritual practice was more profound than just acting as fuel for the fire. The continuity among the floral paraphernalia utilized in different rites at the site suggests the plants themselves came to symbolize sacred notions and were instrumental in preparing for

and implementing rituals. Many scholars have discussed how objects, actions, and utterances function as symbols of something more profound in religious practice (e.g. - Durkheim 1915; Turner 1969, 1977). Turner (1969: 15) writes regarding the Ndembu of what is now Zambia that, "...almost every article used, every gesture, every song or prayer, every unit of space and time, by convention stands for something other than itself." Indeed, the reading of a description of ceremonial rites by any number of ethnographers I have discussed thus far (e.g. - McGee 1990; Redfield and Rojas 1991; Vogt 1993) illustrates how the verbal and material elements of ritual practice are laden with meaning far beyond that which they would have in a secular context. Furthermore, as Vogt (1993) illustrates, there are sometimes layers of symbolism represented by objects of ritual. Black chickens, which are sacrificed in many Zinacanteco rites, are likely symbolic of the black turkeys that were used by the ancient Maya (as we see, for example, on the West Wall of the San Bartolo murals). However, Vogt suggests that somewhat complex ideas lie behind the use of birds like this: "... (they) exemplify an overdomesticated or overculturalized nature figure. They have wings, yet cannot fly; they walk on two legs like people, yet are "corralled" by depending upon people to feed them grain... Thus the chicken is an appropriate symbolic mediator between Culture and Nature" (1993: 91). Therefore, for the Zinacantecos, chickens symbolize not only dual notions of wild vs. domesticated, but also, and perhaps just as significantly, they hark back to the practices of their ancestors.

The leaves that were burned in the ceremonies at Las Pinturas, Las Ventanas, and the Palace Tigrillo could very well have been from specific local trees that perhaps came to represent the protective or cleansing qualities that were needed to separate the architecture and the offerings. Plants like *Calathea* and guava were imbued with meaning as well. They likely represented food for the gods and the burning of them was necessary to make the transformation, or perhaps, like chickens for the Zinacantecos, they had more specific role in ceremonial practice at San Bartolo.

Returning to the leaves represented in the ash, they could be thought of as altars in the same way that Tozzer (1941) describes the use of palm leaves among the Lacandon. The use of this altar to create a barrier between the buildings and the offerings also implies that the leaves were used in the manufacture of sacred space. While the structures were powerful ritual objects themselves, the leaves would have acted to amplify or perhaps focus this power into a bounded area. Turner (1969) describes how in Ndembu marriage rites the participants in the ceremony bend branches to make a circular area that effectively creates sacred space. He suggests that it is through these actions that the area “achieves structure” (Turner 1969: 23).

The leaves would not only have symbolized larger notions of the sacred, but would have also acted as indicators or signals of the rites that were to be performed. The smoke itself undoubtedly served in this role, uniting the participants and observers by bringing them into the realm of the sacred. Indeed, smoke is a particularly pervasive signal because it can be seen from far distances. Furthermore,

if leaves were being “fed” to a smoldering fire, this would have created abundant smoke over some extended period of time. However, the plants used in the ceremonies at San Bartolo, particularly the leaves, may have also sent a message to those within their view that the ceremony was imminent and it was time to prepare mentally for the event. Indeed, it is a human universal to be humbled, silenced, or otherwise moved in the presence of some thing or some place that one finds sacred. Again, while the structures themselves were considered powerful religious features, rituals performed on them were all the more powerful. Furthermore, it was exactly these rites that acted to maintain the perception of these important buildings as such. The preparation of these leaves, a process that was undoubtedly ritualized as well, would have directed the observers’ attention to the event at hand. We can think of this floral altar, then, as a kind of front door into the liminal space where rituals occurred. The presence of the leaves would have provided an early indicator that drew in those present and prepared them for acts of termination, veneration, and other sacred rites. They would have provided the very first step in linking the participants emotionally, by creating a shared sense of humility, reverence and belonging.

Termination Across the Site – Evidence for San Bartolo’s Abandonment

As discussed in previous chapters (see Chapter II), there is strong evidence that small and large sites in the vicinity of San Bartolo were being abandoned in the Terminal Classic. It is very evident from archaeological excavations conducted across the site thus far that San Bartolo was abandoned during this time as well. This

assertion is supported by the fact that there is no evidence for Postclassic residential or civic construction at San Bartolo. Furthermore, given the nature of reuse at the site, it is very telling that excavations have not recovered Postclassic sherds (e.g. – Castillo and Sagebiel 2004; Castillo 2005, 2008). In contrast, there is abundant evidence for a preceding Late Classic occupation at the site. Radiocarbon dates from the Late Classic come from Structure 63 and the Palace (**Table 7.1**). It should be noted that three samples from the Las Pinturas façade ash were run for AMS dates, but the results were clearly erroneous (see Appendix A).

Context	Material	Date Range (2 Sigma)	Intercept	ID Number
Structure 63	Charcoal	ca. 690-900 A.D.	A.D. 795	Beta 187442
Structure 63	Charcoal	ca. 780-890 A.D.	A.D. 835	Beta 187443
Palace Tigrillo	Bone collagen	ca. 600-680 A.D.	A.D. 640	Beta 241932
Palace Tigrillo	Charcoal	ca. 660-810 A.D.	A.D. 735	Beta 241931

Table 7.1: Late Classic AMS Dates from San Bartolo

The dates above indicate that there was an abundance of activity during the 7th and 8th centuries and that certainly by A.D. 900 San Bartolo was abandoned. However, this year marks the very extreme end of the date range. Using the latest intercept of A.D. 835 as a guideline, the radiocarbon dates could be refined to suggest that perhaps by the mid-ninth century the San Bartolo community had largely vacated the site.

Furthermore, the ceramic assemblages from Structure 63, the Las Pinturas façade, the Las Ventanas façade, Structure 157A, and Structure 4 lack the fine paste wares that tend to appear in the lowlands by around A.D. 830. While clearly more data is needed to definitively pin down a date of abandonment, the radiocarbon dates and

ceramic assemblages from the excavations discussed here indicate that San Bartolo did not experience much of a Terminal Classic occupation.

As discussed in the previous chapters, the discovery of ash at Las Ventanas, the Palace Tigrillo, Jabalí, and Las Plumas, and the striking similarity between the former two contexts in terms of phytoliths identified suggest that the burning events at these four locales are related. Moreover, that they represent the termination of the structures. The material signature of termination events in general has been addressed in some detail in the previous chapter and it is evident that the deposits at Las Ventanas, the Palace Tigrillo, Jabalí, and Las Plumas fit this pattern. As such, this data indicates that some time during the Late to Terminal Classic periods, many important structures were being systematically terminated across the site. It is logical to assume that these ritual events and the abandonment of the site are part of the same process and that the termination of these structures represent the final moments of San Bartolo. One issue that has not been addressed, however, is *who* could have been responsible for these acts and *why* the site was abandoned.

Termination events vary not only in their material signature, but also in their larger intent or meaning. More often than not, however, investigators link these ceremonies to acts of violence and warfare. For example, Suhler and Freidel (2003) have used the evidence for termination deposits at Tikal to conclude that the site was attacked by Eznab hostiles and subsequently abandoned. They found evidence for burning, the desecration of burials, the destruction of buildings, and deposits of cultural material, namely ceramic sherds. Investigations at Aguateca have yielded

strong evidence that the Palace Group was attacked at around A.D. 810 (Inomata *et al.* 2001). Excavations at Structures M7-22 and M7-32 suggest that the buildings were burned, partially destroyed, and large deposits of sherds and other materials were littered within the rooms. Inomata and his colleagues have interpreted these finds as evidence for elaborate termination events performed by the site's attackers at the beginning of the Terminal Classic. At Colha, Mock (1998b) attributes termination events across the site to be the result of either internal rebellion or external attack. Indeed, the evidence that thirty elite individuals were decapitated and their faces removed certainly supports her conclusions.

The San Bartolo deposits do not imply events that are nearly this dramatic. While some of the buildings at San Bartolo, including Las Pinturas, Los Saraguates, and Jabalí seemed to have been mined for facing stones in the Late Classic, there is no evidence that they were burned or dismantled in a fashion akin to warfare-related termination activity. Nor have excavations recovered other overt markers of some kind of attack, such the burning of structures, mass graves, or an abundance of projectile points.

Furthermore, the nature of Late Classic San Bartolo may provide some insight into the somewhat peaceful nature of its end. Again, as discussed in previous chapters (see Chapters II and III), during the Late Classic, the residents of the site were opportunists. They recycled and renovated Preclassic structures rather than building anew. Again, it is very likely that the Late Classic community harvested building material from Preclassic structures. This was not uncommon for the ancient

Maya. In fact, most pyramids were renewed via the addition of new layers, but the phases usually occurred in relative rapid succession, perhaps every 50-100 years. Therefore this process is better explained as the maintenance of buildings rather than the recycling of them. In contrast, San Bartolo's Las Ventanas pyramid, for example, had been abandoned for some 400 years before it was renovated in the Late Classic. The building was literally a ruin at the time of the site's Late Classic reoccupation. Perhaps the best explanation for the fact that the community built a room on top of and reused this structure is that they did not have the resources, labor, or mandate for more extensive construction projects.

This scenario can be contrasted with construction at Late Classic Tikal, which is characterized by massive architectural projects. Late Classic Temple 33 effectively encapsulated the North Acropolis, which had been used for the burial of the Tikal kings since the Late Preclassic. Temple 33, which was built by Jasaw Chan K'awiil shortly after his coming to power in A.D. 682, was the first of many large pyramids that became the hallmark of the site in the Late Classic. Subsequently, Jasaw Chan K'awiil constructed Temple II as well as planned and perhaps executed the building of Temple I (Harrison 1999). These two massive buildings were constructed outright in the Great Plaza and formed a triadic pattern with Temple 33. Harrison (1999:141) asserts that the northern position of Temple 33 in the group was critical, as it "...became a northern synonym for the North Acropolis itself." As such, Late Classic architecture at Tikal exhibits the reuse and incorporation of ancestral structures that we see at San Bartolo, but the construction itself was happening on a much larger

scale. Indeed, Jasaw Chan K'awiil was clearly trying to re-invent Tikal at the beginning of the 8th century, and had the resources, labor, and power to do so.

In light of Late Classic construction activity occurring at powerful centers like Tikal, the nature of architectural projects of this time at San Bartolo suggests that the site held a rather weak position politically and economically in the region. Returning to notions of termination, while they are often associated with warfare and violence, this does not seem to characterize what happened at San Bartolo. The site was in no way a powerful center during the Late Classic. As such, it probably didn't pose much of a threat to surrounding communities nor did it have abundant resources for the taking. Given the nature of the Late Classic at San Bartolo, as well as a total dearth of direct evidence for warfare from excavations conducted thus far, it seems clear that community did not reach its end due to some kind of external attack.

Whenever or however the final abandonment of San Bartolo occurred, the evidence suggests that it was not rapid or abrupt. Yet clearly termination rituals were held and the evidence remained fairly undisturbed on the surfaces of abandoned structures until recently. It seems, then, that termination has many faces. Indeed, Freidel has illustrated how different these deposits are at the material level at Yaxuna and Cerros (Freidel *et al.* 1998). While Yaxuna was clearly attacked (Ambrosino *et al.* 2003), evidence from Early Classic Cerros suggests that it was the residents of the declining site that terminated the structures (Walker 1998). Given the absence of evidence for warfare at Terminal Classic San Bartolo, it seems most plausible that it was the residents of the site itself that decided it was time to leave. On the eve of

abandonment, as was the custom across the lowlands, they performed the appropriate rites to “de-activate” important structures across the site.

Venerating the Past at San Bartolo

The archaeological, iconographic, and epigraphic record of the ancient Maya abounds with evidence that they felt compelled and obligated to document their present. The evidence from excavations on the front façade of Las Pinturas indicate that they were equally obsessed with remembering their past. As I have discussed in the previous chapter (see Chapter VI), among the ash deposits, there is a clear distinction between the context and associated finds at Las Ventanas, the Palace, and Las Pinturas. The ceramic deposit found with the ash layer at Las Pinturas was considerably larger than that which was recovered at the other contexts, and the building itself is unique in that it was not renovated during the Late Classic. Moreover, with the exception of the Pinturas reservoir at the base of the platform, there is little evidence that *any* activity occurred at this architectural group during this time other than those that resulted in the deposits found on the structure façade. While buildings located in or near the site’s Main Plaza were being renovated and remodeled, it is evident that Las Pinturas was largely left alone. This cannot be explained by the fact the community was somehow unaware of this pyramid group. Not only would it have been a short 15 minute walk from the Main Plaza, but the Late Classic deposits found there are a testament to their knowledge of the group. Furthermore, excavations thus far indicate that Las Pinturas was the only Late

Preclassic structure that was venerated as such. For example, at another large Late Preclassic group, Los Saraguates, there is no evidence for burning events or other ceremonial offerings, although a smattering of Late Classic sherds on the surface indicate that the community was aware of this locale.

This begs the question: what was so special about Las Pinturas? The evidence indicates that Las Pinturas bore some kind of unique ancestral quality, resulting in the fact that the returning community of San Bartolo treated the pyramid differently than any other building at the site. There is no archaeological evidence that the Late Classic community had any knowledge of the murals in Pinturas Sub-1. The room would have been completely buried under the final phase of the pyramid. Moreover, upon excavation, it was clear that the room had been carefully packed with dirt, stones, and rubble during the Late Preclassic and there was no evidence that this fill had been disturbed by the Classic Maya. However, given the brevity of the scenes portrayed on the North and West Walls in regards to Maya creation, it is safe to assume that the room would have composed a highly sacred space for the Preclassic Maya. Notions about a place that could have represented the dawn of creation itself would have been highly tenacious and could have been maintained over time via the recurrent retelling from generation to generation. As such, the deposits on the façade of Las Pinturas suggest the Late Classic community of San Bartolo had some knowledge of the room itself and its implications.

Acts of veneration do manifest themselves elsewhere at San Bartolo. The evidence from Structure 63 suggests that the Late Preclassic potbelly was the central

feature of this shrine, and that it was for the sake of this monument that offerings were made and rituals were held here episodically over the course of the Late Classic period. The presence of a Late Preclassic heirloom vessel that was cached behind the potbelly affirms that the later inhabitants of the site held ancestral notions about the sculpture. Much like Las Pinturas, the treatment of this potbelly does seem to indicate that it was somehow unique for the Late Classic residents of San Bartolo. The only other stone monument that shows evidence of ritual treatment is the stela found at the base of Las Pinturas. Given the similarity between the ash and ceramic deposits found with the stela and at the corners of the pyramid, it is likely that the monument's relocation and the ceremonial behavior associated with it were part of the same event that resulted in the corner deposits. The deposits surrounding the potbelly at Structure 63, however, are distinct from the Las Pinturas features. They are massive, contain abundant charcoal, are dominated by utilitarian sherds, and contain human remains. This indicates that while the Late Classic community was surely paying homage to the potbelly, it was occurring in a much different way than it did at Las Pinturas. As I have discussed in the previous chapter (see Chapter VI, also Craig 2004), the finds from Structure 63 suggest that the ritual behavior was recurrent and rather continual for some period during the Late Classic. In a process I refer to as "perpetuation," the potbelly was continually venerated and literally maintained in a sacred sense. In contrast, the events at Las Pinturas seem to represent a moment in time that signify a break from the traditional avoidance of the architectural group. The significant link between the Late Preclassic potbelly and Las Pinturas is that they

both conjured up notions about the ancestral past of San Bartolo. Regardless of why or how rituals were performed at these sacred features, they ultimately achieved the same end. That is, these rites served to honor and remember the Preclassic past, and perhaps the mythical past of the site.

The execution of this unique set of behaviors, then, was dependent upon the ability of the Late Classic community to recall the past in some kind of relatively unanimous manner. This notion of “social memory,” as it is generally referred to in recent archaeological literature, addresses the communal recollection of past events in the context of cultural persuasion, shifting identities, and changing perspectives. Social memory is something constructed, reflexive, and collective (Van Dyke and Alcock 2003). In contrast to remembering in a personalized manner through our individual experiential lenses, social memory is shaped, manipulated, and perhaps even invented. Several substantive works have approached the concept of social memory in the archaeological record from a cross-cultural perspective (Bradley and Williams 1998; Mills and Walker 2008; Yoffee 2007; Van Dyke and Alcock 2003;). Regarding the ancient Maya, a growing body of literature has addressed the notion that they remembered and honored the people, beings and events that came before them and that this manifests itself in the veneration of objects (Joyce 2003), monumental architecture (Stanton and Magnoni 2008), and houses (Lucero 2008). The specialized treatment of specific buildings and monuments at San Bartolo are part of a larger pattern of behavior among the ancient Maya. These communities,

ever seeking to legitimize themselves via their ancestral past, shaped and controlled their own memories as a tool for identification in the present.

San Bartolo's Shifting Cultural Landscape

Evidence for the manipulation of memory is only one facet of how the ancient Maya of San Bartolo shaped their collective consciousness. The Late Classic community not only constructed their past, but they also created and recreated perceptions about their physical surroundings. They undoubtedly achieved this in myriad ways, but the archaeological evidence illustrates that this was accomplished by the shifting treatment of important buildings across the site. These structures were imbued with meaning and symbolism from the time of their construction, but these meanings changed radically over time as they were renewed, venerated, terminated, or abandoned.

While some images of pristine and ultimately static Maya cities are aesthetically appealing and masterfully rendered (e.g. - Proskouriakoff 1963), they do not provide a realistic portrayal of Maya sites. It is evident that so much attention has been given to reconstructing Maya cities and towns in as much detail as possible that some Maya scholars have lost sight of the fact these places were subject in the past to the same processes of deterioration that can be seen in the present. Indeed, Stanton and Magnoni (2008: 5) have criticized this “100 percent occupancy” model. Bender has critiqued archaeologists for attempting to “freeze” the past by treating it as something that can be “excavated, packaged, (and) presented” (1992: 376). Work

at many sites across the Maya area, including San Bartolo, illustrates how different structures were reused, venerated and left to decay over time. The consideration of these behaviors allows for more accurate reconstructions of Maya cities and towns. This is particularly relevant to San Bartolo and other sites that experienced prolonged periods of abandonment. While it is plausible that bustling downtown Tikal was well maintained during the Late Classic period, the San Bartolo core was likely peppered with both crumbling ruins and renovated temples at this time.

Certainly the ancient Maya inhabited constructed space, as did all ancient communities and as we continue to do today. As humans, we create the physical, social, and ideological milieu in which every action takes place. In postmodern definitions of “landscape,” human geographers (Daniels and Cosgrove 1988) assert that it is a complex “cultural image” that is comprised of the natural environment as well as material culture. Cosgrove (1993: 5) suggests that landscape is the product of, “humans continuously transform(ing) the natural world into cultural realms of meaning and lived experience.” He proposes that landscape is like a stage, in that it provides a backdrop for all human behavior.

While definitions of “landscape” vary in the archaeological literature, in recent decades it has been broadly defined as something cultural, built, and ever-shifting. For example, according to Bender (1992: 735), archaeological landscapes are “active,” phenomena, in that, “...people engage and re-engage, appropriate and contest them, use them to create and dispute a sense of identity – whether of self, group, or nation.” As such, ancient communities were continuously negotiating and

reinterpreting their surroundings. Economic, political, religious, and environmental shifts would have altered the communal perceptions of cities and towns.

Furthermore, the way that individuals identified with their surroundings, particularly in regards to their place in the power structure, would have shaped their interpretation of their own landscape. Knapp and Ashmore (1999: 1) suggest that, “landscape is an entity that exists by virtue of its being perceived, experienced, and contextualized by people.” The authors (1999: 10-13) have refined notions of archaeological

landscapes categorically by proposing that they manifest themselves in three forms:

“Constructed landscapes” are built for the explicit purpose of symbolizing some set of shared beliefs. Knapp and Ashmore (1999) use the pyramids of Egypt and the North American burial mounds to illustrate this concept. “Conceptualized landscapes” are natural features that have come to represent sacred or otherwise powerful notions held by the community, such as sacred mountains, caves, and springs. Finally, “ideational landscapes” involve concepts, rather than material things or places. They can provide messages about morality, lineage, history and the sacred. Knapp and Ashmore (1999: 10) acknowledge that the boundaries between these categories can be difficult to define and that, in fact, “landscape is essentially all of these things at all times.”

Stanton and Magnoni (2008) propose that reused buildings existed in liminal zones between these varying aspects of the landscape. Indeed, the consideration of the activity that surrounded abandoned, remodeled, and reused buildings and monuments at San Bartolo illustrates the fluidity of these landscape categories. For example, while Las Pinturas was a constructed feature, it also embodied ideological notions of

religion and power. Furthermore, pyramids themselves were conceptualized by the ancient Maya as mountains, connecting the realm of humans to the celestial body (Freidel *et al.* 1993), so the building also represented a natural feature. As such, Las Pinturas existed at the intersection of constructed, conceptual, and ideational landscapes.

The notion of “place” is also useful for understanding ceremonially or functionally reused structures. Van Dyke and Alcock have defined places as, “...spaces that have been inscribed with meaning, usually as a result of some past event or attachment” (2003: 5). Their definition allows for the fact that humans were constantly reconstructing their own perception of their surroundings through everyday experiences. Furthermore, this concept of place acts to encapsulate and inextricably connect buildings, monuments, and natural features. Indeed, it is logical that aspects of the cultural and natural landscape would not necessarily be compartmentalized in the minds of ancient people. Rather, they were parts of a larger whole that contributed to the over-arching conceptualization of the place itself.

When we consider ancient sites in the context of this complex set of ideas, the erroneous nature of static interpretations of the past is abundantly clear. “Landscape” and “place” are particularly useful for archaeologists because they provide us a kind of window into the visual and conceptual reality of ancient cities and towns. That is, they give us the ability to “pan out” and envision what these sites might have actually looked like when they were in use and how this physical appearance might have shaped what they would have meant to their inhabitants.

Applying these concepts to the evidence from San Bartolo provides a vantage point from which to approach community-held perceptions of the city during the Late Classic. Deposits of sherds and ash found across the site in varying forms and contexts illustrate how the built landscape of San Bartolo, and thereby the buildings themselves, were perpetually in flux. Evidence for ritual behavior at Las Pinturas illuminates the changing perception of this architectural group over time. Whereas the pyramid was undoubtedly sacred to the Late Preclassic community, the building took on an ancestral quality during the Late Classic. As with most Maya pyramids, the many layers of this structure were representations of and connections to the deceased kings that commissioned their construction. However, given San Bartolo's 400-year hiatus in occupation, it could be argued that Las Pinturas explicitly conjured up notions of distant, forgotten, and perhaps mythical kingship. Thus the time gap effectively amplified the sacred and ancestral nature of the pyramid. Furthermore, it is evident that the Late Classic events held at Las Pinturas represent one moment in time. This stands in contrast to the deposits at Structure 63, which indicate some kind of continual veneration over time. This suggests that perceptions about Las Pinturas were changing during the Late Classic itself. There were periods during which this architectural group was neglected and perhaps avoided, and one moment during which rituals intended to venerate the structure were held along the façade. The impetus for this shift is unattainable at present, but for the purposes of this discussion it is clear that Late Classic perceptions of Las Pinturas underwent significant changes during this time period.

The evidence also shows that the perception of many other buildings across San Bartolo experienced equally radical shifts during the Late Classic. The site was a crumbling ruin at the time of the site's reoccupation. Over time, perhaps over decades or generations, the site's Main Plaza was revitalized. The Late Classic Maya effectively reclaimed San Bartolo by remodeling the Palace, Las Plumas, and Las Ventanas. However, they maintained connections to the past by making regular offerings to the Late Preclassic pot-belly that sat within view of the plaza in Structure 63. It is safe to assume that this would have been very active space during the Late Classic. The old buildings had been somewhat repaired, the elite took up residence at the Palace and Las Plumas, and modest houses surrounded the area around the core. However, at the end of the Late Classic period, San Bartolo, like so many sites in the area, began again to experience decline. At some point, a decision was made to largely abandon the site. When this happened, structures like Las Plumas and the Palace, which had been used as residences for 200 years prior, were "de-activated" via specific religious rites. At about the same time, rituals were held at Jabalí and Las Ventanas, structures that had functioned in a civic-ceremonial capacity for generations, in order to mark their end in a sacred sense. The cultural landscape of San Bartolo had radically shifted once more. Indeed, the perception of those buildings would have again been altered in the minds of the community by the performance of termination rites.

Future Research

This work has addressed the continuities and disjunctions between ritual deposits at Las Pinturas, Las Ventanas, the Palace, Structure 63, Jabalí, and Las Plumas. Each of these contexts represents public space, elite space, or both. As such, a significant segment of San Bartolo's Late Classic population may not be directly represented by these religious rites. One avenue for expanding this work would be to conduct further excavations at San Bartolo to investigate whether the patterns established within the ceremonial deposits are present at Late Classic residential groups across the site. By exploring ceremonial practices at the household level, I would be able to look for the presence or absence of evidence for ancestor veneration, termination, and ritual plant use. Based on the work of McAnany (1994), Lucero (2008) and others, evidence for ancestor worship is to be expected to some degree in residential contexts. However, the termination of houses is less well documented and may simply preserve in the form of ash. Furthermore, the investigation of ash at the microbotanical level potentially has much to offer an exploration of household ritual and religious practices in general at San Bartolo. Evidence for *Calathea*, guava fruit, water-related plants, and local tree leaves would link ash recovered from Late Classic ritual deposits within domestic structures to the activities that occurred across the site at this time.

Investigations at the nearby site of Xultun may contribute most significantly to a broader understanding of the religious, economic, and political history of San Bartolo. Surprisingly little work has been done at the site considering its size. The

Carnegie Institution sponsored the first expeditions to Xultun in the early 1920's. This research was primarily centered on documenting stelae and broadly defining major architecture at the site. Work did not resume at Xultun until the investigations by the Peabody Museum's Corpus of Maya Hieroglyphic Inscriptions Project in 1974 and 1975 (Von Euw 1978, 1984). The goals of the Corpus were ultimately centered on documenting the glyphs and mapping the site in considerable detail. In 2008, as part of the San Bartolo Regional Archaeological Project, the first vertical excavations occurred at Xultun. A series of test pits were placed in the site's three large plazas (Plazas A, B and C) and a broad chronology of the site has been determined. These excavations yielded evidence for an occupation spanning the Late Preclassic to the Terminal Classic periods (Simms 2008). However, only extensive excavations at the site's various architectural complexes will provide information on the nature of these occupational phases at the site. These investigations are planned for the near future and will be directed by Dr. William Saturno. In regards to San Barolo, one of the major goals of the work at Xultun is to address whether the two sites wax and wane in relative opposition to one another. For example, when San Bartolo was virtually abandoned during the Early Classic, did the population at Xultun increase? Based on the presence of several Early Classic stela at the site (Garrison 2007) it can be asserted that Xultun was not abandoned during this time. The establishment of a decided increase in the population of Xultun during the Early Classic could suggest the relocation of San Bartolo inhabitants there. While many communities from sites across the Petén were likely on the move at the beginning of the Early Classic, the

proximity of San Bartolo to Xultun would make it a likely source for an influx of people.

Future work at Xultun could also address more specific questions related to my own research at San Bartolo. The 2008 excavations exposed a Late Classic ceremonial deposit of approximately 3000 sherds and other offerings in Plaza A (Simms 2008). Given the bulk of material recovered, Simms (2008) has interpreted this deposit as a possible termination ritual. This could have interesting implications for similar activities that occurred at San Bartolo at roughly the same time. Furthermore, the ceramic assemblage from the deposit was dominated by Tinaja and eroded polychrome sherds. It would be interesting to run INAA on a sample of the polychromes from this deposit and compare them to the sherds from San Bartolo. Given that it has long been suspected that the Saxche Palmar vessels are for the most part being traded into San Bartolo (Castillo 2008), INAA data from the Xultun polychromes could provide some important insight into this issue.

One of the most significant contributions of these investigations is methodological in nature. The analysis and interpretation of the phytolith data has some profound implications for the application of this line of evidence in future research. Phytolith analysis is a relatively new approach to understanding the past. The last few decades of research by Dolores Piperno, Deborah Pearsall, Steve Bozarth and others (see Chapter V) have vastly expanded the discipline in regards to the identification of New World plants. However, some large classes of flora continue to be only broadly definable using phytolith analysis. Trees, for example,

can rarely be identified to the species or genus level. Knowledge about the specific species of trees would be particularly useful in understanding the ritual use of leaves that is described above. Again, I suspect that there would be some continuity among the tree leaf phytolith species if this level of information were available. However, as paleoethnobotanists continue to conduct analyses, new identifications will inevitably be made. *Calathea* tuber phytoliths, for example, were only discovered in the last couple of years (Chander-Ezell *et al.* 2006), work that ultimately provides a significant contribution to the investigation of the San Bartolo samples.

Beyond the expansion of the number of taxa that can be identified via phytolith analysis, another exciting trend is that scholars are starting to address new and interesting questions using this line of evidence. For example, rather than looking just at what people ate, we can ask *how* they prepared their food (e.g. – Chandler-Ezell *et al.* 2006). Indeed, as this work has illustrated, biosilicates in general can provide a critical body of data in the reconstruction of ritual practice. For example, as I have discussed in the previous chapter, there is no shortage of imagery in Maya art that depicts food offerings as a form of sacrament. Furthermore, ethnographic and archival documents indicate that these practices continued well after the fall of the Classic Maya. It stands to reason, then, that food remains may be just as common as pottery or pottery fragments in ritual deposits. Phytoliths, as I have illustrated here, can be a very effective line of evidence for illustrating the presence of edible goods in ceremonial contexts. As such, phytolith analysis should certainly be common practice on sediment that is found within undisturbed ceremonial contexts

such as cached vessels or other protected deposits. This work has shown that the application of phytoliths as a proxy measure can yield some vastly compelling results. In this case, the samples elucidate to a number of specific ritual behaviors, including the offering of water itself, the intentional creation of smoke, and the utilization of specific plants or parts of plants in ritual performance. These behaviors were only accessible via the phytolith data. As such, these investigations will hopefully lead by example and encourage the application of this method to address a broader suite of questions.

APPENDIX A – AMS RADIOCARBON DATING

In September of 2009, I sent three samples to National Ocean Sciences AMS Facility at Woods Hole. The dates that came back were clearly erroneous and in fact predate the settling of San Bartolo altogether. I accredited this problem to the nature of the samples and not the work done by the laboratory.

There are two approaches to directly dating ash layers that lack charcoal, as those that were recovered from Las Pinturas. The first is to attempt dating the particulate charcoal directly. The second is to date the phytolith occluded carbon that becomes trapped in the phytolith itself during formation (see Carter 2009). I chose the latter for the San Bartolo samples because it provides a date on the plant itself rather than the associated material.

I chose three samples from the Las Pinturas façade excavations for AMS dating: one from the Northwest Corner (SB-1C-14-2); and two from the Southwest Corner (SB-1C-20-4 and SB-1C-22-4). Steve Bozarth removed the particulate charcoal from the samples and the remaining phytolith isolates ranged from 100-300 mg in size. We were concerned from the onset about the size of the samples. I was in correspondence with Dr. John Carter from Victoria University of Wellington throughout this process and he went out of his way to advise me and the lab on preparing and running the samples.

In the end, the dates ranged between 3000-1000 B.C., which predates any evidence for occupation at San Bartolo. Unfortunately, I cannot at this time assert what the cause for these problematic dates could have been. According to Carter

(personal communication 2009), dating phytolith-occluded carbon is inherently problematic. In his work, he and his colleagues have obtained dates that were clearly too young and those that were clearly too old. Furthermore, I suspect with the San Bartolo samples that sample size was an issue.

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